

CURRENCY AND CREDIT

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CURRENCY AND CREDIT

BY
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PREFACE.

To add yet another to the legion of books which have been written on Currency is an act which almost requires an apology. But extensive and complex as the subject has always been, every year that passes brings new developments which add to its extent and its complexity. A subject which grows in this luxuriant fashion opens up a corresponding variety in the methods of theoretical approach. The present work is not intended to set up one particular method to the exclusion of all others. Still less does it exalt any single practical measure as a panacea of currency disorders. Its purpose is rather to present a systematic analysis of currency and credit movements, and especially to avoid that phrase, "other things being equal," by which it is so fatally easy for theory to step straight from premises to conclusion.

Scientific treatment of the subject of currency is impossible without some form of the quantity theory. Two forms of this theory, both rigorously true, will be found enunciated in Chapter III. But the quantity theory by itself is inadequate, and it leads up to the method of treatment based on what I have called the consumers' income and the consumers' outlay—that is to say, simply the aggregates of individual incomes and individual expenditures. This method has been employed throughout the succeeding pages.

It will be found that pre-war institutions and conditions are often referred to in the present tense. This is no more unreal than to speak of them in the past, as things of the past. Even now the war is not technically over, and in the prevailing obscurity it is impossible to say what can or cannot be regarded as normal or actual.

Chapters XV. to XIX. are occupied with illustrative examples drawn from a variety of periods and countries. I am indebted to the editors of the "Economic Journal" for bringing out the greater part of Chapters XV. and XVI. in the issues of the Journal for September and March, 1918.

R. G. HAWTREY.

June, 1919.

CONTENTS.

CHAPTER	PAGE
I. CREDIT WITHOUT MONEY	1
II. METALLIC MONEY	17
III. PAPER MONEY AND THE QUANTITY THEORY	30
IV. THE FOREIGN EXCHANGES	56
V. SYSTEMS OF NOTE ISSUE	72
VI. INTERNATIONAL CURRENCY MOVEMENTS	86
VII. THE MECHANISM OF FOREIGN EXCHANGE	98
VIII. A CONTRACTION OF CREDIT	107
IX. FINANCIAL CRISES	127
X. FINANCIAL CRISES (<i>continued</i>)	151
XI. MONEY AND COINAGE	163
XII. THE THEORY OF BANKING	185
XIII. WAR FINANCE	206
XIV. WAR INFLATION	218
XV. THE ASSIGNATS	233
XVI. THE BANK RESTRICTION OF 1797	255
XVII. A CHANGE OF STANDARD	279
XVIII. THE GOLD STANDARD	299
XIX. THE GOLD STANDARD (<i>continued</i>)	321
XX. AFTER THE WAR	344
XXI. CONCLUSION	364
INDEX	381



CHAPTER I.

CREDIT WITHOUT MONEY.

MONEY is one of those concepts which, like a teaspoon or an umbrella, but unlike an earthquake or a buttercup, are definable primarily by the use or purpose which they serve. The use or purpose of money is two-fold: it provides a medium of exchange and a measure of value.

According to the classical doctrine of money, mankind, in order to avoid the intolerable inconvenience of the direct barter of one kind of commodity or service for another, has learnt to choose one standard commodity to be offered by every buyer and accepted by every seller. Whether this standard commodity is established by law or custom, the seller willingly accepts it in payment because he knows that it will be accepted in turn by those from whom he wants to buy. The practice which makes the selected commodity the common medium of exchange almost inevitably makes it also the common measure of value. A market which priced each commodity separately in terms of every other would be impossibly complicated; the use of one standard commodity as money enables us to express all prices in terms of this one commodity.

If we approach the subject in this way, we naturally assume that the use of some selected commodity as money is the only alternative to a state of barter. To show what part the use of money plays in society, and how great a difference it makes, we are invited to turn to remote and benighted communities which have never learnt the use of it, or to conjecture what must have been the economic condition of mankind before money was originated at all. Such comparisons may well exaggerate the importance of money. In order to see

in its true proportion we ought rather to take a completely organised and civilised society, with all the modern developments of commerce and industry, and to examine to what extent such a society might have existed just as it is without the use of money, or which of its characteristics would be necessarily sacrificed. In other words we have to find not the historical but the logical origin of money.

Suppose then that society is civilised, and that money does not exist. Goods are brought to market and exchanged. But even though there is no medium of exchange, it does not follow that they must be bartered directly for one another. If a man sells a ton of coals to another, this will create a *debt* from the buyer to the seller. But the buyer will have been himself a seller to some one else, and the seller will have been himself also a buyer. The dealers in the market can meet together and set off their debts and credits. But for this purpose the debts and credits, which represent the purchase and sale of a variety of goods, must be reduced to some common measure. In fact a *unit* for the measurement of debts is indispensable. Where a commodity is used as money, it naturally supplies the unit for the measurement of debts. Where there is no money, the unit must be something wholly conventional and arbitrary. This is what is technically called a "money of account". Even when money is used, it may occasionally happen that the unit for the calculation of debts diverges in some degree from exact correspondence with the money in circulation. In that case the distinction between money and money of account immediately becomes a practical one. The value of the standard coin will be quoted in terms of the money of account, and varying amounts of the standard coin will be needed to pay a given debt. This is an approximation to the state of affairs which we are assuming.

But however conventional and arbitrary the unit may be, once it is established as the basis of the debts and prices and values of a market, it is bound to assume a certain continuity. If the bargains of a day were completed within the day, and everyone could exactly balance his debts against his credits, the next day's business might start with an entirely new unit,

as arbitrary as the other and having no relation to it. But in fact this balancing of debts and credits is impossible; each day's transactions will leave a residue of indebtedness to be carried forward to the next. The same unit will therefore necessarily be used from day to day. Each day's business starts with the record of the previous day's closing prices calculated in the unit. Each dealer in the market calculates his own command of wealth in the same unit; it affords the basis for his valuation both of what he wants to buy and of what he wants to sell, and he looks for only such divergence from the previous prices as variations of supply and demand will justify. The total effective demand for commodities in the market is limited to the number of units of the money of account that dealers are prepared to offer, and the number that they are prepared to offer over any period of time is limited according to the number that they hope to receive. Therefore, arbitrary as the unit is, capricious variations in its purchasing power will not occur.

Inconvenience would undoubtedly be caused by the absence of any generally recognised medium for the discharge of an outstanding balance of indebtedness. As between dealers balances can for the most part be carried forward from day to day, but immediate payment will sometimes be required, and in case of dispute there is no recognised "legal tender" in which a court of law can order the debtor to pay. How this problem might best be solved by the dealers we need not stop to inquire. This question of the payment of debts is a wider one than that of the settlement of balances among dealers in a market.

In the processes of production a service rendered creates a debt from the person to whom the product belongs to the person who renders the service. Most people derive their incomes from services rendered either by their personal exertions or by the use of their property in production. The practice which we have attributed to the dealers of setting off one debt against another may be described as the use of *credit* as the means of payment. As H. D. MacLeod insisted, Debt and Credit are different names for the same thing. That

which to the debtor is a debt, is to the creditor a credit.¹ Can credit be used as the means of payment not only between dealers, who are all men of business, but between employers and employees?

An umbrella-maker might pay wages by creating a debt from himself to his workmen, but, in order that his workmen may *spend* their wages, the liability must be transferred to other shoulders than those of the umbrella-maker, for he can sell them nothing but umbrellas.

The solution of this difficulty is to be found in the intervention of some one who *deals in debts*. The umbrella-maker can sell to this "dealer in debts" the debts due to him for the umbrellas which he has sold, and in return the "dealer in debts" can take on himself the liability for the umbrella-maker's debts to his workmen. If every creditor assigned his rights as against his debtors to the dealers in debts, the setting off of debts against one another would be enormously facilitated.

A dealer in debts or credits is a *Banker*. The debts of the whole community can be settled by transfers in the banker's books or by the delivery of documents, such as bank notes, representative of the banker's obligations. So long as the bankers remain solvent, their obligations supply a perfectly adequate means for the discharge of debts, because a debt can be just as well cancelled against another debt as extinguished by a payment of money. Of course it is still true that if the banker himself is sued in a Court of Law, there is no legal tender in which he can be ordered to pay. But if he is solvent, he can obtain a credit from another banker. In fact, the natural test of the solvency of a private trader would be his power of obtaining sufficient bank credits to meet his liabilities, and the test of the solvency of a banker would be the ready convertibility of his obligations into the obligations of other bankers.

But, it may be asked, is not this to give away our whole hypothesis? We postulated a state of society without money.

¹ The antithesis is between a debt and a credit. Credit, the noun of quantity, means the stuff of which debts (or credits) are made.

Yet if a man can go to his banker and cash a cheque in bank notes, is not this to admit the existence of something which is money in all but name? It is true that we are accustomed to think of bank credits as money. But this is only because for the practical purposes of every day the distinction between bank credits and money is rarely of any importance. And for all that a bank credit is *merely* a debt, differing from other debts only in the facilities allowed by the banker for transferring it to another creditor. No one imagines that a trade debt is money, though it may be as good an asset as a bank credit.

Having found in the bank credit the means of making payments, how far have we provided for a standard of value?

The money of account provides a unit for the measurement of debts. It must also provide a unit for the measurement of prices. For when a price of any commodity is quoted in a market, this constitutes an offer, the acceptance of which creates a debt from the purchaser of the commodity to the vendor. The function of the price is to determine the magnitude of this debt.

But the unit for the measurement of prices is inevitably the unit for the measurement of values. The relative values of all commodities (in the economic sense of values) are measured by their relative prices. And the price of each commodity measures its value relative to the unit. What then is the value of the unit? So long as value means value in exchange, the value of anything, whether it be a commodity or the monetary unit of account, must always be a *proportion*—a value in terms of something else. Just as every commodity has a value in terms of the unit, so the unit has a value in terms of each commodity. It may be the equivalent, say, of a pair of trousers, or of a ton of coals.

Now in some sense or other the chief requirement of the unit of value is stability. But what do we mean by stability? It is all very well to say that the value of the unit must not vary, but there is no single interpretation of the value of the unit. Its value in coals may be stable, while its value in trousers may rise or fall. This problem is not peculiar to the

conception of a money of account. It arises equally where the monetary unit is defined as the equivalent of a prescribed quantity of a selected commodity, such as gold. We still want to know whether the value of gold in terms of other commodities varies.

The significance and the measurement of a rise or fall in the unit of value will engage our attention later. Here it is enough to say that if we can point to a tendency for *all* prices of commodities, reckoned in the unit, to rise together, that means that the value of the unit is falling; and a tendency for all prices to fall means that the value of the unit is rising.

Will the continuity in the use of the unit from day to day be of itself sufficient to prevent its value in commodities varying in either direction unduly, even though it be unrestrained by equivalence to any specified commodity? If every one who received a credit immediately spent it on commodities, the function of the banker would be reduced to that of settling up every one's books at the end of the day. He would be a humble accountant, remunerated by a moderate commission or in some other suitable manner. Without doubt, however, just as every one in the economic societies we know keeps some ready money in hand, so in that which we are postulating every one would keep some unexhausted credit in hand to meet the payments, foreseen or unforeseen, which will have to be made in the near future. These reserves of unexhausted credit in the hands of the public are of course the counterparts of undischarged debts due from the bankers. As the reserves always exist, the bankers are perpetually indebted to that extent to the public. And as the public retain these reserves of credit of their own accord and for their own convenience, the bankers do not have to pay interest upon them, or, at any rate, do not pay interest at the full rate.

Now the bankers are merely dealers in credit. They do not take over liabilities except in consideration of receiving equal assets. The umbrella-maker who wishes to pay his employees in credits on a banker, must purchase these credits out of the proceeds of his umbrellas. But a banker is not willing to deal in umbrellas and will not buy them himself. It is of

the essence of the banker's position that he sells credits to all sorts of producers and dealers, so that his credits may be accepted in payment by all sorts. He will find it more convenient (as actual bankers do) to *lend* his credits rather than to buy goods. His assets will consist mainly of advances made to producers and dealers, who will employ the credits advanced in their respective businesses and will pay interest upon them out of the profits so made.

The great credit-machine will work very much as it does in the actual world. An order is given by a merchant to a manufacturer to supply a certain quantity of goods. The manufacturer borrows from his banker a sufficient credit to meet the necessary expenses of manufacture, including the cost of raw material, for the period which will intervene before the goods can be delivered and payment received from the merchant. When the goods are delivered the merchant in turn borrows their value for the period for which they are likely to be on his hands. The goods may pass from one manufacturer to another and from one dealer to another several times before they are finally disposed of piecemeal by the retail dealers to the consumers. Each manufacturer or dealer will probably be indebted for a part at any rate of their value so long as he holds them. A debt, as it were, is attached to the goods so long as they are being *dealt* in—that is to say, bought with a view to being sold. This debt is only finally paid off when the goods are sold, not to be dealt in, but to be *consumed*. But each manufacturer or dealer is quit of the debt when he is quit of the goods. He borrows to meet the expense of making or buying the goods, uses the proceeds of his borrowing to pay the people employed in manufacturing them, or to defray the purchase price; then, when he disposes of them, applies the proceeds to pay off the sum borrowed, and retains any balance as his own profit. Thus *new* credits, as distinguished from those created merely in replacement of old ones, are created to pay the profits, remuneration, interest, etc., of those who contribute, either by their personal services or by the use of their property, to production.

The borrowing is done by traders—by those, that is, who

either produce or buy goods, etc., with a view to subsequent sale. The stocks of goods in course of production, in transit or awaiting sale, are the property of the traders, and at any moment there is a stream of goods passing from trader to trader through all the successive stages. Simultaneously the corresponding credit operations are taking place. Any individual trader may be both making and receiving payments. His actual borrowing and repaying operations may have no definite relation to any individual buying and selling transactions, but will only represent the net result after his receipts and payments are set off against one another—that is to say, when his outlay on the production or purchase of goods exceeds his sales, he borrows ; when it is less, he repays. His, indebtedness rises and falls with his stock in trade.

Consider what happens in a particular week. Production is increasing the traders' stocks ; sales to the consumer are diminishing them. Those of the traders who are engaged in production are paying out such part of the expenses of production as come in course of payment in the week. The retailers are receiving the sums that the consumers spend in the week. These consumers are to a great extent the same people who receive payment from the producing section (though of course there are some classes of the community, such as landlords and domestic servants, whose incomes do not come from businesses that require to be "financed").

Between the retailing and producing sections of traders stands the wholesale section, the merchants.

The wholesale merchants fill a very important place in the trading system. They judge demand and regulate supply. The outlook of the retailer is local and limited (except where wholesale and retail dealing are combined, and the differentiation of function is lost), and he cannot make a comprehensive survey of the prospects of demand. It devolves therefore on the wholesale merchant to set the machinery of production at work, by giving orders to the producers, and incidentally to start the machinery of credit. This is especially true of manufactures and the production of raw materials. In agricultural production supply is a matter of opportunity and demand is

comparatively steady, and there, consequently, the functions of the merchant count for much less. The production of fixed capital is different again. The order is given not by a merchant but by a promoter, who makes it his business to procure savings to cover the cost. Money invested is of course *spent*; it is spent on fixed capital. The demand for fixed capital is made up of people's savings in just the same way as the demand for consumable commodities is made up of their expenditure on their present needs. In this process the need for temporary borrowing comes in at two points. The contractor, who engages to construct the new fixed capital, may borrow to meet the expenses in anticipation of the payments he is to receive from the promoter. And the promoter himself may have to borrow in anticipation of the savings he hopes to collect from the investor.

When a banker lends, we say that he grants or creates credit or "a credit". This is a loose way of describing a double transaction. The banker assumes an immediate obligation to his customer, in exchange for the customer's obligation to him at a future date. The banker's obligation or "bank credit" meets the customer's need, because it can be assigned away as a means of payment. The customer's obligation, since it yields interest or discount for the period before it becomes due, supplies the banker's profit. Thus *two* credits or debts are really created, though only one of them is destined to be used as a means of payment.

In our selected week there will be determinate market rates of wages, salaries, etc., and determinate market prices of commodities. The merchant, in deciding at what price he will order goods, must be guided by the then prevailing market prices; the manufacturer, in deciding what price he will accept, must be guided by the then existing costs of production. To a great extent the incomes which the consumers have to spend, and which constitute the demand for commodities, are the component parts of those same costs of production, it being understood that the traders themselves are included among the consumers and their profits among the costs of production.

The consumers' purchasing power is therefore largely supplied out of the credits which the traders borrow from the banks. Credit originates in production and is extinguished in consumption. The supply of purchasing power is thus regulated by the transactions which require to be financed. It starts from the giving of an order to the producer, and the quantity of purchasing power brought into being when the producer borrows to carry out the order depends upon the price at which it is placed. The capacity of the productive resources of the community is limited, and, at any rate when this limit is approached, continuity in prices implies continuity in the supply of purchasing power.

Every borrower in fact has to take account of conditions that limit the amount which he borrows, and this very limitation of borrowing tends to confine the income and consequently the expenditure of the consumer to their previous limits.

Nevertheless it is obvious that this principle of continuity is incomplete. There is room for variation in the volume of orders, the rapidity of their execution, the quantity of credit with which they are financed. If we are to prove that the monetary unit will be a stable standard of value, we must show that if exposed to any disturbing cause the unit will tend to *return* to its former value, or at any rate that it will arrive at a new and relatively stable value not differing much from the old.

Suppose then that the routine of the credit machinery is interrupted. This routine depends upon the new borrowing being on the whole sufficient and not more than sufficient to replace the advances paid off. The credit created must be equal to the credit extinguished. Granted this, the stability of every other part of the machine follows.

First consider the case where there is a curtailment of new borrowings. It may be, for instance, that the merchants have given fewer new orders to the manufacturers, or perhaps that borrowers have been applying to the reduction of their indebtedness credits which they would otherwise have spent. In the latter case, expenditure being diminished, sales will fall off and the stock of commodities in the hands of the dealers will be

less drawn upon than usual, and the dealers will give smaller orders to the manufacturers for the replenishment of those stocks. Thus in either case a slackening in the creation of new credits means a diminution of orders to the manufacturers. But the result of this will be that the labour and plant of the community are no longer fully employed, and the total amount of wages and profits will be diminished. Consequently the expenditure of the public will begin to fall off. But this will react on the sales of the retailers and merchants. They in turn will further restrict their orders for fresh supplies of goods, and so the original restriction of credit will tend to repeat and reinforce itself. A corrective tendency will, however, early be at work. The restriction of credit means a restriction of the bankers' business. The bankers will not willingly acquiesce in the consequent shrinkage of their profits, and they will try to tempt their customers to borrow. They will in fact reduce their charge for interest.

It should be observed that, quite apart from any deliberate action by the bankers, there is in any case an important influence at work to lower the rate of interest. As we have seen, the curtailment of credit occasions a flagging of the demand for commodities. This flagging of demand will produce a fall of prices. The merchants will find that their stocks of goods lose value while they hold them, and this loss of value will diminish the profit out of which they pay interest on the loans with which these stocks are financed. Falling prices of themselves therefore make borrowing less attractive and reduce the rate of interest which borrowers are willing to pay. The bankers must reduce their charges of interest accordingly before they can even induce their customers to continue borrowing on the diminished scale which their turnover of goods will justify, and, if these customers are to be tempted to increase their borrowing, the rate of interest must be reduced even below this low level.

If, as is not impossible, the bankers fail to encourage borrowing in this way, the restriction of credit and consequent depression of trade will go on until disappointed merchants are driven to borrow on terms which they do not hope will be

remunerative, merely to keep their businesses alive. This will prevent credit-operations from dwindling down to nothing, and the circulation of the credits so created will presently revive the old routine. But in the meantime the volume of credits in circulation and the nominal amount of wages and prices paid out of them (calculated in the conventional unit of value) may have been enormously reduced. In other words the value of that unit, expressed in services or commodities, may have been enormously increased. Nor is there any tendency for it automatically to return to its former value. Indeed a new disturbance may be initiated in the form of a new curtailment of credits, and after a new period of restricted trade may end in yet a further appreciation of the unit of value.

The probability of a contrary variation, an expansion of credits and a depreciation of the unit of value, is, however, at all times much greater. And this movement is even more unlimited in scope. Self-interest prompts both the enterprising trader ever to borrow more, and the enterprising banker ever to lend more, for to each the increase in his credit operations means an increase in his business. Suppose some of the merchants, in the hope of extending their business, give increased orders to the manufacturers. The manufacturers will forthwith borrow more than usual from their bankers. They will urge on the business of manufacture, will pay more to their employees, and will receive greater profits in proportion to their greater output. They and their employees will have more to spend ; the retailers will dispose of more goods, and will take over more from the merchants ; the merchants will give yet further orders to the manufacturers. The manufacturers, finding their productive capacity overstrained, will quote higher prices to the merchants ; the merchants, being unable to supply the retailers fast enough or to maintain their stocks of goods, will raise prices to the retailers, and the retailers will raise prices to the public. The general rise of prices will involve a proportional increase of borrowing to finance a given output of goods, over and above the increase necessitated by the increase of output. This increase of bor-

rowing, meaning an increase in the volume of credit, will further stimulate trade. Where will this process end? In the case of the curtailment of credits the self-interest of the bankers and the distress of the merchants combined to restore the creation of credits, though not to its pre-existing level. But in the case of the expansion of credits there is no such corrective influence at work. An indefinite expansion of credit seems to be in the immediate interest of merchants and bankers alike.

The continuous and progressive rise of prices makes it profitable to hold goods in stock, and the rate of interest which the merchant who holds such goods is prepared to pay is correspondingly high. Thus the merchant and the banker share between them a larger rate of profit on a larger turnover. The credit created for the purposes of production becomes purchasing power in the hands of the people engaged in production; the greater the amount of credit created, the greater will be the amount of purchasing power and the better the market for the sale of all kinds of goods. The better the market the greater the demand for credit. Thus an increase in the supply of credit itself stimulates the demand for credit, just as a restriction in the supply of credit leads to a decline in the demand for credit. Either the expansion or the contraction of credit may therefore proceed absolutely without limit, and the corresponding fall or rise in the value of the monetary unit would therefore also proceed without limit. In each case all standard of value will be completely lost.

But, it may be asked, why invent this fantastic hypothesis of a civilisation without money, merely to prove, what was obvious from the beginning, that prices released from any physical standard of value would vary without limit? Parenthetically it should be remarked that the hypothesis is not so entirely fantastic; during the first fifteen years of the Bank Restriction Act, 1797 to 1812, the universal means of payment in England was the Bank of England note, which was not legal tender and was merely the evidence of a debt due from the Bank, but a debt not payable in gold or any other

medium. But without pursuing that subject further here,¹ we may say that the justification for the hypothesis is that it provides us with an analysis of the functions of credit, which would otherwise be inextricably interwoven with the functions of money.

In the first place we can define the money of account as the unit for the measurement of debts; we can see that the unit for the measurement of debts is necessarily also the unit for the measurement of prices, and that the existence of market prices fixes a relation between the unit on the one hand and every form of wealth on the other.

Next we can show that the business of the dealer in debts, or banker, intervenes to provide a universal means of payment, differing in no essential respect from the bank credits with which we are familiar, save only that of convertibility into money.

We then find that this apparently artificial system contains within itself a principle of continuity, by which it might be maintained in equilibrium. As every one's wealth is measured at any time in the monetary unit upon which transactions have till then been based, the sums which purchasers are prepared to offer are regulated by the value of this unit. The level of prices cannot be capriciously or discontinuously changed.

But finally it turns out that this equilibrium is *unstable*. Every displacement from the equilibrium position tends to magnify itself.

Further our hypothesis may serve to show that there is a distinction between a debt and a promise to pay. A debt is fundamentally an obligation to give not money but *wealth*. Legally the use of money enables the debtor to close the transaction. From the economic standpoint, however, the creditor's claims are not fully satisfied till he has *spent* the money. He must go into the market and draw from it so much wealth as is represented by the purchasing power he has received. If, instead of receiving money from the debtor, he assigns away his right in the debt to some one else in exchange

¹ See chap. xvi.

for the appropriate amount of wealth, he has taken a short cut to the same end. But in the absence of money there is a certain difficulty in closing transactions. The value of a debt depends upon the solvency of the debtor. The credit of the ordinary debtor is not good enough, or at any rate not well enough known, for his debt, unsupported by security or guarantee, to be a suitable means of payment. The use of bank credits would be necessary for this reason alone. But even banks are not always of unquestionable solvency, and in the exchange of a credit on one bank for a credit on another there is no finality. The need for a medium of payment which cannot legally be disputed is obvious.

We now see the part that money has to play. First of all, it has to provide the means for the legal discharge of a debt; secondly, by supplying a standard of value, it has to correct the instability of credit. We started by saying that money is a medium of exchange. This is true enough; if goods are sold for money and the money is laid out on the purchase of goods, the former goods are indirectly exchanged for the latter, with money as the *medium* of exchange. But legally money is the means of discharging a debt, and this is really the more general conception. It is used as a medium of exchange because a purchase creates a debt, and money provides the means of paying the debt. When payment is made in ready money this merely means that the debt is *immediately* discharged. A purchase for money can always be analysed into the creation and discharge of a debt. The discharge of a debt in money cannot always be identified as the completion of a purchase or exchange.

Credit and money are both equally media of exchange. Credit is often said to be a substitute for money. It would be just as accurate to say that money is a substitute for credit, that the legal means of discharging a debt is a substitute, so far as the creditor is concerned, for the debt itself.

The second function of money, that of providing a standard of value, arises naturally out of the first. The value of a debt immediately due is necessarily equal to the value of the means by which it can be legally paid. Thus the problem of

stabilising credit is transformed into the 'problem of stabilising the value of money. We shall find that the expansive tendencies of credit are in perpetual conflict with the maintenance of a fixed standard of value, and a great part of our subject is taken up with the problem of how best to 'reconcile this conflict.

CHAPTER II.

METALLIC MONEY.

WE have now arrived then at a revised definition of money. It is the means established by law (or custom) for the payment of debts. Consequential upon this characteristic are both the functions by which we sought to define it at the outset, that of a medium of exchange and that of a standard of value.

According to the classical theory of money, as we saw, money is a selected *commodity*. Law or custom decrees that debts may be paid in gold or in silver or perhaps indifferently in either. Gold and silver are the raw materials of certain industries and have a value as such, and in virtue of this value they supply an independent standard for the measurement of debts. A banker's obligation, whether it take the form of a bank credit or a bank note, becomes an obligation to pay money. Such an obligation may be used as a medium of payment; a debtor who has a bank credit may pay his debt by assigning this bank credit to his creditor. But a bank credit, not being the *legal* means of discharging a debt, must be readily transformable into money if required. The banker's obligation must be to pay money.

If gold is to be the legal medium of payment, it must be put on the market in a form in which its quantity can be easily and quickly and certainly estimated. This is done by coining. The ostensible purpose of coining is to divide the gold up into small portions convenient for handling, and to certify by a stamped inscription that each such portion is of the prescribed weight and fineness. Under a system of free coinage anyone with gold to dispose of can bring it to the Government to be so divided up and certified, and this will be done either free of charge or at a charge nearly negligible in comparison with the value of the gold. If this system is

effectively carried out, if all coin that is reduced by wear appreciably below the current weight is promptly withdrawn, if there is no obstacle to melting down coin for use otherwise than as currency, then the value of coin and the value of bullion can never diverge far, for either can be transformed into the other at a trifling expense. Gold as a commodity will then be really the standard of value. Any departure from this system is regarded, under the classical theory, as a perversion. The nature, extent and causes of such departures we shall have to consider later. In the present chapter we shall assume that a system of free coinage is faithfully and efficiently maintained. In the next chapter we shall turn to the consideration of systems in which the orthodox theory of free coinage is avowedly thrown aside.

The most important characteristics of the classical theory are that the value of the monetary unit is determined by the value of the metal for purposes other than coinage,¹ and that the supply of money, being dependent upon the supply of the metal, cannot be arbitrarily increased.

If a gold coinage is to be combined with a credit system, we have next to consider where the one will begin and the other end. A payment in coin being a legal discharge of a debt while a payment in credit is not, coin will always be used in preference to credit unless there is some superiority of convenience or other advantage in the use of credit. For large payments the superior convenience of credit is obvious, since it avoids the trouble of counting, handling, and scrutinising the coin, and the cost and risk of transport and storage. Moreover, the privileges of a banker's customer are valuable to the well-to-do man and especially so to the trader. Of course all these advantages presuppose the solvency of the banker, but we may assume that the risk of failure of a large and well-established bank, if not absolutely negligible, is at any rate small compared with the risk of losing money which, instead of being deposited at a bank, is kept at a trader's premises where the risk of loss by theft falls on him.

For small payments the advantages of credit are not so

¹ This is only true subject to reservations (see chap. xi.).

considerable. Payments by cheque, though they save trouble for large sums, give additional trouble for small sums. If small payments are to be made in credit at all, they must be made with bank-notes. But bank-notes have very little advantage over coin. Like coin they may be lost; like coin they need to be counted, and change must sometimes be asked for them. And while the small bank-note seems to have no advantage over coin to set against its legal inferiority in discharging a debt, it is subject to a special disadvantage in that it may circulate in the hands of uninformed people who have no means of judging of the credit of the bank which issued it and who may be seized with an unreasonable yet widespread distrust. The mere fact that there are people who are unwilling to accept the notes of a particular bank will be quite a sufficient reason for every one to demand coin in exchange for the notes. Even those who themselves think the bank perfectly solvent do not want to hold their purchasing power in a form which would not be accepted by every one. Small bank-notes (i.e. for amounts smaller than the prevalent weekly wage of the working class) are likely to be an embarrassment rather than a source of profit to the issuing bank, and accordingly they tend to fall out of use, except where there is some special reason to favour them.¹

Consequently the dividing line between coin and credit is likely to separate large from small transactions. The weekly wages of the working man or low-paid employee will be paid wholly in coin. The relatively highly-paid employee will be paid in credit. The large transactions between men of business will of course all be carried through with credit, and their profits will accumulate in the form of credit. But even the man who receives his income in the form of credit will use coin for small retail payments, railway fares, etc. It is therefore easy to see what modifications ought to be introduced into the picture given in the preceding chapter of the transaction of a week's business on a credit basis, in order to allow for the introduction of money.

¹ This does not apply to legal tender notes, which are themselves money (see chap. iii.).

The manufacturer who has obtained a credit from his banker to enable him to execute the order given him by a dealer, will draw out week by week a certain amount of cash against that credit for the payment of wages. The recipients of this cash will spend it in the course of the week on their day-to-day expenses, and so it will come into the hands of the retailers, rent-collectors, tramway companies, etc., who will pay it all back into the banks. At the same time the manufacturers, merchants, salaried employees, and other people with large enough incomes to have banking accounts, will all need to keep part of their available purchasing power in their pockets in coin. The sum so retained, being destined only for petty expenses, will be small in comparison with their incomes, but they will spend a certain amount out of it in the course of the week and draw sums out of the banks equal, on an average, to what they have spent. The dealers who intervene between the retailer and the manufacturer are concerned in large transactions for which credit is appropriate.

The use of money does not disestablish the normal process of creating credit. Money, it is true, is always being paid into the banks by the retailers and others who receive it in the course of business, and they of course receive bank credits in return for the money thus deposited. But for the manufacturers and others who have to pay money out, credits are still created by the exchange of obligations, the banker's immediate obligation being given to his customer in exchange for the customer's obligation to repay at a future date. We shall still describe this dual operation as the creation of credit. By its means the banker creates the means of payment out of nothing, whereas when he receives a bag of money from his customer, one means of payment, a bank credit, is merely substituted for another, an equal amount of cash.

Now let us examine again the effects of a disturbance of the credit machine, with the modifications introduced by the use of money. Consider the effects of an increase in the credit given. Suppose that in a particular week somewhat larger orders than usual are given to the manufacturers, and that the manufacturers obtain correspondingly larger credits

from the banks. These larger credits are required for the increased output of goods, and are drawn upon for increased payments of wages, more hands being employed and overtime perhaps being worked. A greater amount of cash is drawn out of the banks than is usual, and is added to the stock of cash in the hands of the working men. A part, but probably not the whole, of these increased receipts of cash will be spent, and will so come back to the banks through the retailers. There will thus be an increase in the volume of purchases by the working classes, which will lead to further orders yet being given to the manufacturers. The accelerated sales will mean increased profits to the retailers and merchants, and the increased output will mean increased profits to the manufacturers; as soon as these increased profits come to be drawn upon, there will be increased purchases by the credit-using classes. These increased purchases, like those of the wage-earners, will be quickly reflected in further orders to replenish the stocks of commodities.

The important question to consider is what will be the effect of these movements on the distribution of coin, for the use of coin is the new factor in the problem. The stock of coin is made up of that in the hands of the bankers and that in the hands of the public. The coin in the hands of the public is made up of that in the hands of the wage-earners and others who have not banking accounts, and the pocket-money of those who have. The pocket-money even of a very rich man may be quite a small sum. The number of individuals with banking accounts is small compared with the number of those who have none. The total amount of coin which the former class, taken in the aggregate, uses as pocket-money is probably not large compared with the cash which represents the entire liquid resources of the much more numerous working class. Further, the pocket-money of the well-to-do man probably varies little; it is hardly, if at all, greater in a time of prosperity than in a time of adversity. The working man, on the other hand, is driven from time to time to draw on his reserve of cash in hard times, and finds it difficult to make good the gaps in it. But when good times come, and

he gets regular employment with overtime earnings and presently an increase in the rate of wages as well, he can restore his reserve to the amount which prudence requires. No doubt the thrifty man will put his savings into a savings bank or some other agency that will keep them safe and pay interest on them. But he must first see to it that he has a little money in the house, and, even when he has enough, and all his further savings are going into the savings bank, he will not pay in every half-crown as he earns it; so long as he is saving he will usually have some money destined for the savings bank waiting in the house. Consequently when employment is good, and wages high, a certain amount of the money paid out each week to the workmen fails to come back to the banks in the following week, and there is in fact what is called a withdrawal of money for "internal circulation". The fact that this drain of coin occurs is of great importance in the theory of currency. The stock of coin in the hands of the bankers is limited. Once it is exhausted they will fail to discharge their obligation to provide money on demand, however solvent they may be. If they are to avoid this calamity they must take steps to check the drain of coin.

The drain of coin is only one among several effects of the expansion of credit. Of the net amount of new credit created in a week—that is to say, of the excess of new credits created over existing credits paid off—a part goes into the hands of the well-to-do consumer and is spent by him in the form of credit, without being transformed at any stage into coin. It is only a part which is paid out in coin to the wage-earners, and the greater part of this part comes back to the retailers in return for goods purchased. At the beginning therefore the drain of coin into circulation is hardly perceptible. (The important effect of the expanding credits at that stage is the additional purchasing for consumption by both credit-using and coin-using classes.) It is only when this stimulus to the sales of goods has reacted to a considerable degree upon output and prices, that a really marked effect will be felt on working class earnings, and consequently on the power of the working classes to absorb coin. Though regularity of em-

ployment and a resort to overtime increase *earnings* to a material extent, it is only after a considerable interval that the prosperity of the manufacturer is reflected in an increase of *wages*. Consequently it is only very gradually that the bankers can become aware that the growth of credits is threatening their reserves of coin. By the time the drain of coin becomes perceptible, credits will already have been increased to such a point that there would be a heavy additional drain even if there were no further expansion of credits. Not only are wages still below the level which the existing rates of profits would justify, but the wage-earners are still in process of adding their weekly surplus receipts to their little hoards, and the cash in their hands is short of the total which it will reach even without any increase of wages. Yet, unless the bankers are gifted with a degree of foresight that practical men do not always possess, it will only be at this stage that they will take any measures to safeguard their position.

The danger arises from the undue increase of credits; the remedy is to be found only in a curtailment of credits. The grant of a credit rests in a banker's absolute discretion. He is under no legal obligation to accommodate a borrower. But a flat refusal to lend to traders who genuinely need advances for the purposes of their legitimate business may have disastrous consequences. If a few bankers take this action, the result is merely to increase the pressure on the rest. If there is a general refusal to lend, there will be a general disorganisation of business. Dealers who have undertaken to buy cannot fulfil their contracts. Those who expected to sell to them find themselves without the funds they had counted on, and yet cannot tide over their difficulty by borrowing. The result must be that perfectly solvent traders fail to meet their engagements.

Short of an absolute refusal to lend, there is much that bankers can do to restrict credit. They can apply a more severe standard to the security offered; they can reduce the maximum period for which they are willing to lend; they can discriminate as to the purpose for which the borrower wants the loan. A banker knows much of the affairs of his

customers, and can often practically veto hazardous or unnecessary enterprises, or can at any rate exercise much influence in advising caution.

But it has come to be recognised that the banker's principal instrument for the regulation of credit is the rate of interest. When there is a scarcity of a commodity the price is raised, and the diminished supply goes to those who bid highest for it. The price charged for a loan is the interest upon it. If the demand for loans is outstripping the supply, the market can be brought into equilibrium by an increase in the rate of interest.

It is sometimes urged as an objection to this course that the interest on advances is so unimportant an item in the profit and loss account of a trader that a rise in the rate would only have a very gradual effect, and that something much more drastic is needed, especially at a time of high profits. Now the high profits must of course be taken into account in deciding just what increase in the rate of interest is needed. The reason why they are high is that prices are rising, and the value of any stock of goods grows, even while it is in the dealer's hands. But if the rate of interest is raised high enough to offset the extra profit anticipated from this cause, there is no reason why it should not react rapidly, almost immediately, on the demand for new credits. It may be conceded that the manufacturer, though he is not quite indifferent to the rate of interest, can afford to treat it as of small account in comparison with his other expenses. He is specially concerned to keep his plant and workmen fully employed. He gets his order from the wholesale dealer, and he is not going to refuse to accept it because to execute it he will have to pay 7 per cent. per annum for the money borrowed (for a few weeks' only perhaps), instead of 4. But it is the wholesale dealer himself who is frightened by high interest. He borrows money to hold stocks of goods in the course of their passage from the manufacturer to the retailer. He makes his profit out of the difference between the price at which he buys and the price at which he sells, and the set-off against his gross profit for insurance, rent, wages, etc., is quite small.

compared to the whole value of the goods. The set-off on account of interest is therefore by no means unimportant. In the case of the manufacturer the value of the finished product may be, for example, three times that of the raw material. The actual expenses of manufacturing may be perhaps three-fourths of the two-thirds by which the value of the product is increased in course of manufacture, i.e. half the final value. The addition of 1 or 2 per cent. to this half is almost negligible. The merchant on the other hand buys and sells enormously more goods in proportion to his capital, but adds to what he buys not the large additional value represented by manufacture but the relatively small additional value represented by the dealer's profit. This profit may be perhaps 10 per cent. on goods which are held in stock for, say, six months or more. Such part of the goods as are held with borrowed money will have to pay interest in addition to other expenses, and a sudden jump in a half-year's interest from 2 to $3\frac{1}{2}$ per cent. may well make a merchant hesitate to order a fresh consignment. But it is the merchant, as we have seen, who takes the initiative in production. If he can be induced to delay giving fresh orders, though his own demand for loans will be unaffected till the time at which those orders would have been completed if he had given them, the manufacturer's demand for loans is diminished immediately. The merchant can stand a very considerable diminution of his normal stocks of goods without suffering any serious inconvenience, and any diminution in the value of his stocks diminishes by an equal amount his indebtedness to his banker. The period for which the merchant keeps his goods on hand unsold is inversely proportional to the quantity of goods so kept; the interest charge is proportional to this period; but (apart from variations of market price) the profit on the turn over of the goods is independent of the period of storage. A rise in the rate of interest is thus a direct incentive to the merchant to keep down his stocks and delay giving fresh orders. And as he is so sensitive to the rate of interest, the whole machinery of credit, in which he plays such an important part, will be equally sensitive. But as has already been mentioned, the

rise in the rate of interest must be sufficient to offset the effect of rising prices. If prices rise while the merchant holds his stocks of goods, the amount of the rise has to be added to his profit on the turn over. If, with prices unchanged, his profit would be 10 per cent., then with a 5 per cent. rise of prices his profit would be raised to 15 per cent. When dealers expect prices to rise, they try to increase their stocks in order to gain the advantage of this profit; by doing so they increase the immediate demand, and tend to bring about the anticipated rise of price at an earlier date; and the tendency to increase stocks ceases when this rise of the present price has gone far enough to wipe out the prospect of exceptional profit. In calculating whether it is worth while to go on adding to his stock, one of the factors of which the merchant has to take account is the payment of interest on the additional money to be borrowed for the period for which he must hold the stock. A rise in the rate of interest will affect his calculations very materially. When he is buying in the hope of a rise of prices, not only must he hold his stocks for a longer period than usual, and therefore pay more in interest at a given rate, but while the gain in price is more or less speculative, the extra charge for interest is certain.

The dealer in securities responds to a rise in the rate of interest in much the same way as the dealer in commodities. Indeed he is even more sensitive to it. He buys securities to sell them with a narrow and uncertain margin; his calculations are in small and varying percentages, among which the dead-weight of an apparently trifling additional interest charge may be quite a serious factor.

When the bankers, perturbed by the drain of cash into circulation, put up the rate of interest, it is their aim to raise it to the critical point at which it is just sufficient to curb the enterprise of the dealers in securities and the dealers in commodities. If they can attain this point, the stream of fresh orders both for fixed capital and for consumable goods will be stemmed. And in proportion as production flags, the incomes derived from production will flag too. That intimate connection between the volume of fresh credit created and the de-

mand for goods, which is the cause of the instability of credit, will be brought into play. But in practice it is exceedingly difficult for the bankers either to judge accurately when to take action, or to tell, when they have taken it, whether it is effective.

The expedient to which banks almost invariably have recourse is to aim at preserving a certain fixed proportion between their reserve of cash and their liabilities. If too much credit is given, the reserves of some or all of the banks will fall below this fixed proportion (which need not of course be the same for all the banks concerned). Each of the banks to which this happens will immediately take steps to diminish its credits and to restore its reserves to the conventional proportion, by charging a higher rate of interest, and the market rate of interest will thus be raised. If the rise in the rate is insufficient, warning will be given by a renewed fall in the cash reserves. At first sight it would seem that this method of proceeding would absolutely secure the banking community against the danger of excessive credits. It may be conceded that it goes a long way towards doing so, and perhaps that no better method has yet been found. But for all that there are sources of weakness in the method. The true cause of an excessive demand for credits is to be found in the depletion of the merchants' stocks, the prosperity which enables the consumer to deplete those stocks by his purchases being due to the fresh orders given for their replenishment. But the productive powers of the community are limited, and, as its output approaches the maximum, further orders will only produce further and further delay in deliveries. The manufacturer's borrowings are proportional not to the orders awaiting execution but to the work actually in hand, and there may thus be a great *latent* demand for credits of which the bankers know nothing. The bankers' balance sheets will only show the actual credits outstanding, and as the indebtedness of the merchants is proportional to their stocks, which have been depleted and cannot be quickly replenished, while that of the manufacturers is calculated only for the work actually in hand, the proportion of liabilities to cash may not be at all excessive,

though, of course, the credits will be swollen, in both cases, by high prices.

The greater the accumulation of orders on the manufacturer's hands, the greater will be the earnings of their workmen, and the greater, more particularly, the demand for higher wages. Consequently, while the accumulation of orders is being worked off the drain of cash will continue, and it will be just as formidable to the bankers' reserves notwithstanding that the total of outstanding credits does not appear to be great. This situation is dangerous in two ways; first, that, owing to the apparently moderate amount of outstanding credits, the bankers may believe themselves secure at a time when they ought to be taking prompt action; and, secondly, that, even if they do take action, the effect will not be so rapid as they expect. They may really have checked the fundamental danger of the position, in that they have effectively stopped the stream of new orders from the merchants to the manufacturers, and yet the demand for fresh credits and the drain of cash into circulation may go on undiminished. The consequence may be a state of panic among the bankers, who, unaware of the cause of the apparent ineffectiveness of the measures they have taken, despair of saving themselves from failure, refuse credits recklessly, call in existing loans regardless of the embarrassment of the debtors, and precipitate a series of bankruptcies among their customers and themselves.

The fact is that there is no golden rule for keeping the extension of credits within bounds. If the bankers keep large reserves and take early steps to safeguard them, not merely when the proportion of reserve to liabilities falls below their conventional limit, but as soon as trade begins to become suspiciously profitable, and if they have the courage to avoid panic measures even when their reserves seem to be melting away to nothing, they are likely to keep control of the situation. But bankers are human, and absolute security appears to be unobtainable so long as the legal medium of payment is something of which the supply is limited, or nearly limited, and cannot be increased at will under the stress of a crisis. The introduction into a credit system of a stable standard

of value is a very equivocal improvement if it means that an inflation of credit is going to produce a panic and a long list of failures, instead of a depreciation of the unit of value.

It may be retorted, that the danger of a crisis arises only from the assumed absolute limitation of the supply of gold, and that though the fresh supply to be obtained from the mines at short notice is negligible in proportion to the stock already in existence, there may be large stocks available in foreign countries. The extent to which foreign stocks can be drawn upon is a matter of importance, which we shall have to investigate presently. But before we can usefully consider it, we must turn to another expedient by which it is possible to make good a shortage in the supply of money.

CHAPTER III.

PAPER MONEY AND THE QUANTITY THEORY.

IN Chapter I. it was shown that credit, in the form of a banker's obligation, would supply society with a medium of payment, but not with a stable standard of value. In Chapter II. we have just shown that the use of a commodity, gold, as a standard of value gives rise to a new set of problems. The natural practice of the banker is to grant credits to his customers without demur at the highest rate of interest he can get, short of deterring them from borrowing. But so long as the rate of interest is not deterrent—so long, that is, as it does not exceed the rate of profit likely to be made from the use of the sums borrowed—there is an inherent tendency on the part of traders to borrow more and more and of bankers to lend more and more. This tendency works just as freely as if the stabilising influence of the gold standard were not present, *until* the demand for cash for circulation occasions an actual shortage in the banks' gold reserves. And even when this happens the gold standard does not remedy the situation automatically; it can only act as a warning to the bankers that they must take some positive action to restrict credit. If they fail to do so, or if the action they take is not effective, they may be brought up short by finding their vaults completely denuded of cash.

In such an event what is then the remedy? What is wanted is some medium the supply of which can be increased, if need be, *at will*. This medium is found in paper money. It is enacted by law that a paper document, designed like a bank-note to defy the ingenuity of the forger, shall be legal tender for the discharge of a debt.

Paper money resembles bank-notes in appearance, and in being a medium of payment of no intrinsic value, which passes

from hand to hand without any other formality than delivery. The two must, however, be carefully distinguished. In principle the difference between them is clear. A bank-note is *evidence* of a credit with a banker. Its value arises solely from the banker's obligation, of which it is, as it were, the title-deed. If the banker fails, the note ceases to be worth its face value; unless specially secured, it will only entitle the holder to share in the banker's assets, along with the other creditors. Paper money, on the other hand, derives its value from being legal tender. The debtor has the right to pay it, and the creditor is bound to accept it. Unless (as occasionally happens) the law is allowed to become inoperative, the paper money cannot fail to circulate at par. But this means at par with the *money of account*, not with any physical standard of value such as gold or silver.

Thus a bank-note *represents* credit; a legal tender note is *itself* money. In its application nevertheless the distinction between them becomes uncertain. While there are plenty of instances (like the present British currency notes) of indisputable paper money, there are many others where notes which have been issued as evidence of bank credits have been made legal tender. Is it in that case the document, or the credit which it represents, that is really the legal means of payment? The credit and the document are so inseparably connected that it is often impossible to say. The Bank of England note is legal tender in all payments above £5, but only so long as the bank maintains specie payments. Here it seems clear that it is the bank's obligation to pay that is legal tender. Yet the same obligation, if represented not by a promissory note but by a deposit, is not legal tender.

And if a bank with the privilege of issuing legal tender notes is allowed to suspend payments in cash, is it still *the* bank's obligation that is legal tender or is it the paper?

For practical purposes it is not necessary to settle these difficulties, which are largely matters of legal definition. The important distinction is between notes which are legal tender and notes which are not. If the delivery of the document secures the final discharge of a debt, the question whether it

'is the document itself or the credit that it represents to which this virtue belongs can be left unanswered.¹

Paper, money is usually used to supplement a metallic standard. Either it is convertible on demand into specie, or it circulates alongside gold or silver money, and as both paper and coin can be used at the debtor's choice to discharge a debt, both paper and coin have the same value in terms of the money of account.

But it sometimes happens that there is so much paper money in circulation that no debtor ever need use coin to pay a debt. In that case anyone who wants coin can no longer rely on getting it by selling commodities or securities or by calling up debts. These expedients will only produce paper, and if he wants coin he must buy it as a commodity, and perhaps pay extra for it.

If the values of paper and coin are thus divorced, what determines the value or purchasing power of paper? Where a commodity such as gold is adopted as a standard, it is easy to see that the value of the monetary unit must be equal to the value of gold as a commodity. But where the only money is paper inconvertible into anything of intrinsic value, there is no such simple answer to the question.

It is sometimes maintained that no paper money can have any value except in virtue of some expectation of its ultimate convertibility into coin. Indeed inconvertible paper is often a relic of a pre-existing convertible issue, the issuing Government having failed to maintain the convertibility of the notes. If they are at a discount, as compared with their nominal value in coin, this discount, it is contended, measures the distrust of the credit of the Government, which has in any case broken its engagements in making the notes inconvertible. According to this view, their immediate convertibility on demand has been replaced, as in the case of a bank which has suspended payment, by a contingent and remote convertibility at some future date, when the public finances permit, and

¹ It even happens sometimes that notes which have ceased to be convertible continue to be used as a means of payment without being legal tender. They are practically paper money, though only a "customary tender".

PAPER MONEY AND QUANTITY THEORY 33

people accept the notes in discharge of debts on the strength of this contingent and remote convertibility, but only at a value which allows for the indefinite postponement of its accomplishment. It may be admitted at once that future convertibility into coin is sometimes an important factor in determining the value of paper money which is for the time being *inconvertible*. But that does not mean that this is an explanation of universal or even of general application. Not only are there many cases where there is practically no expectation of future convertibility, but even where this expectation does exist it probably plays a much less important part in fixing the value of the paper money than the fundamental quality of being legal tender. In fact there is a demand for the means of payment *as such*, and this demand gives a value to whatever is established by law or custom as the means of payment, quite apart from any value it may possess for any other purpose. Gold itself derives part of its value from the demand for it as a means of payment.

If an issue of paper money derives a value in the market from the prospect of its ultimately becoming convertible into coin, and if this value is *greater* than its value as the means of payment, it will be acquired and held by speculators who wish to profit by its convertibility when the time comes. But this is an exceptional case of quite subsidiary importance in comparison with the general question of the determination of the value of the legal means of payment. To answer this question we must discover in what manner the value of a legal tender currency without intrinsic value and unsupported by convertibility into anything of intrinsic value is determined.

The same problem really arises in the case of the hypothetical country assumed in Chapter I., which had no money and used credit as the sole medium of exchange. There, the unit of value was something entirely arbitrary, a mere arithmetical abstraction. In all the transactions into which the unit of value enters, what requires to be measured is the *proportion* which the value of some commodity, service, right, or debt bears to some other. To measure that proportion, it is convenient to express each value as a number, but the

choice of a unit as the basis of these numbers is as non-essential as the choice of a language in which the bargains are to be concluded. In the economic life of the community the proportions to be measured are of the substance, while the unit in which they are measured is of the form only. This being so, if the whole of the economic fabric of society and all the transactions be supposed given, to fix the numerical measure of one value is to determine the unit, and therefore to fix the numerical measures of all.

Now one of the quantities which are measurable in terms of the unit of value is the aggregate of all the bank credits outstanding. This aggregate, which, under our hypothesis that no money is used, is of course the same as the aggregate of unspent purchasing power in circulation, may conveniently be called the "unspent margin". It can be arrived at either by adding up the liabilities of all the banks, or by adding up the credits held by all their customers, whether depositors or note-holders. For to ascertain the total of a number of debts we can obtain the particulars either from the accounts of the debtors or from those of the creditors. Let the unit of value be settled, and the numerical measure of the unspent margin is determined. Conversely, if the number of units of value in the unspent margin is settled, the unit of value is thereby determined, and the determination of the unit of value determines all the other quantities, such as the prices of commodities and services, which are measured by it. Thus we see that, given all the economic conditions, the prices of commodities are directly proportional to the number of units of value contained in the unspent margin of purchasing power.

But we must beware of reading more into this conclusion than it really says. It does not say that if the number of units of value in circulation *changes*, the prices of commodities will change in exact proportion. A change in the unit of value is likely to cause a number of other changes (some of which we examined in Chapter I.) so that the economic conditions are no longer all "given". Nor can we assume that prices at two different times will be exactly proportional to the quantities of purchasing power in circulation (though, if

PAPER MONEY AND QUANTITY THEORY 35.

economic conditions at the two epochs are very nearly identical, this will be nearly true). All that we have established is that, if *everything* in the economic picture be painted in, save only the numbers to be expressed in terms of the unit of value, then, since the mutual proportions of these numbers are already determined by the economic conditions, the number of units in any one will be directly proportional to the number in any other, and in particular the prices of commodities will be proportional to the number of units of value contained in the aggregate of bank credits or unspent margin.

Suppose now that money is used. Money will be substituted for credit in a certain proportion of the transactions. A certain proportion of the purchasing power in being—that is to say, of what we have called the unspent margin—will be in the form of money instead of bank credits. The extent to which money is held rather than credit will be wholly determined by the convenience of the people and their habits and preferences. The unspent margin is now made up of two parts, the money in circulation and the bank credits outstanding. Each is expressible in terms of the unit of value, and the proportion of one to the other is determined, like all the other proportions, by the economic conditions. Provided therefore that all the economic conditions are given, including the proportion of bank credits to money, we infer that all money values, and in particular the prices of commodities, are directly proportional to the quantity of money in circulation. In the case of a free gold currency, or a paper currency maintained at a fixed gold value, one of the given economic conditions must be that the value of gold as currency is equal to its value as a commodity, and this is sufficient to determine all the other values. In the case of a paper currency with no fixed value in terms of gold or any other commodity, the principle at which we have arrived shows how its value is determined. The value of the unit is inversely proportional to the quantity in circulation. Here we have in its simplest form what is called the Quantity Theory of money.

But long as this principle is subject to the limitation that *all* other economic conditions must be given, it is

necessarily sterile. Before we can make practical use of it, we must see which of the economic conditions are really relevant to the determination of the value of the unit.

The first question to answer is this; how do members of the community settle what margin of unspent purchasing power they shall keep, whether in the form of cash or in the form of credit? From the point of view of the individual there are three principal purposes for which reserves of purchasing power have to be kept.

First, income and expenditure do not exactly keep pace. In the case of the weekly wage-earner they very nearly do keep pace; but even he gets occasional windfalls in the shape of overtime earnings, or other exceptional receipts, and suffers occasional interruptions of earning power from illness and unemployment; and from time to time he incurs extra expenditure on furniture, clothes, holidays, etc. The well-to-do man receives his income at longer and sometimes at more irregular intervals; he may have a fixed salary or dividends paid quarterly, or he may be earning professional fees in variable amounts and at variable times. Every one tends to have a good deal of money in hand just before a large item of expenditure becomes due or just after receiving a large item of income.

Secondly, every one endeavours to keep a supply of money in hand to meet an unforeseen emergency. It is impossible to anticipate all the different occasions for expenditure that may arise, and therefore the prudent man so regulates his balances of cash or credit that at those times (immediately after large disbursements or before large receipts) when the balances are lowest he still has something in hand.

Thirdly, the man who is saving cannot be perpetually investing his savings in driblets. He lets his balances accumulate until he can spare some considerable sum; he then invests all he can without unduly depleting his balances, and starts saving again. The procedure is the same in the case of the working man who periodically puts two or three pounds in the savings bank; in the case of the professional man who every now and then invests a hundred or two; or in the case of the rich man whose savings are reckoned in thousands.

The problem of regulating balances is somewhat different for a trader's business. It is a normal practice in the case of such a business to borrow for short periods, and this makes possible a much nicer calculation of balances than in the case of an individual. A balance of cash or credit is in itself a source of loss, since, except in the case of a deposit subject to notice, it is earning no interest, and even a deposit subject to notice earns interest at less than the full rate. By borrowing to meet large disbursements and applying large receipts in repayment of borrowings, a business concern can reduce this loss of interest to a minimum. Its power of borrowing also enables it to be ready for an unforeseen emergency without perpetually keeping a stock of money on hand for the purpose.

As to the distribution of the unspent margin of purchasing power between cash and credit, we have already seen that the man rich enough to have a banking account will keep the bulk of his reserve balance in credit, and only an unimportant sum of pocket money in cash. The poor man keeps all his reserve balance in cash, except in so far as he puts it in the savings bank, and a deposit in a savings bank is rather an investment than a part of the unspent margin. For a business, balances are kept in the form of credit, but the manufacturer has constantly to draw out large sums of cash to pay wages, and the retailer, the railway, tram or omnibus company, the collector of working class rents, the theatre manager, and others whose receipts are mainly in cash, are continually paying cash into the banks. The banks themselves keep reserves of cash sufficient in proportion to their liabilities to meet their customers' demands.

For each private individual the appropriate balance of credit and the appropriate balance of cash will bear a determinate proportion to his income (not of course the same proportion for different individuals or for the same individual at different times). For each business the appropriate balances will likewise be determined by convenience, but will be proportional rather to the gross transactions or turnover, than to the net income of the business. Traders, however, can regulate their balances more closely. Consequently their balances bear a far smaller proportion to their turnover than those of private

individuals to their incomes. In all cases alike the balances of purchasing power kept in reserve are settled with a view to the transactions to be financed.

The requirements of the community for reserves of purchasing power may be regarded as constituting the demand for credit and money. The supply of credit emanates from the banks. The supply of money is determined by the legal and administrative arrangements for regulating the coinage and the issue of legal tender paper. But here again the banks intervene, for it is only such part of the available stock of money as is in the hands of the public that forms part of the unspent margin of purchasing power. The money which forms the reserves of the banks is excluded from the unspent margin, though of course it is part of the assets held by the banks against the credits which compose their liabilities, and these credits are part of the unspent margin. The unspent margin in fact is equal to the money in circulation, *plus* the obligations of the banks. These obligations are equal to the assets of the banks, *less* their capital. The amount of credit rises and falls with the assets of the banks, and these assets are composed of two parts—interest-bearing assets, such as loans, discounts and investments, and cash reserves. If the cash reserves are increased by a return of money from circulation into the banks, or if they are diminished by the withdrawal of money from the banks into circulation, the unspent margin is unaffected ; all that happens is that so much cash is turned into credit, or so much credit into cash. But if the banks increase or decrease their loans or advances, the unspent margin is increased or decreased by the same amount. Now the banks undertake to transform cash into credit and credit into cash at the choice of their customers ; they themselves claim no say in the matter. The choice of their customers as between cash and credit proceeds, as we have seen, from the economic conditions, being determined entirely by the convenience of the individual. The public cannot be compelled arbitrarily to increase or decrease their holdings of cash ; they can only be induced to do so by modifying the economic conditions. If the quantity of money is increased or diminished the result in the first instance is

merely to increase or diminish the cash reserves of the banks, and it rests with the banks to decide whether they shall make any change in their other assets or in their demand liabilities.

Changes therefore in the unspent margin depend upon the action of the banks in creating more or less credit. Such changes are not really within the purview of the quantity theory, which deals, strictly speaking, with static conditions. The quantity theory, in the form in which we have enunciated it, merely equates the unspent margin of purchasing power, which is a total of monetary units, to the command over wealth which the people hold in reserve. It equates, in fact, a total of monetary units to a total of wealth,¹ and so determines the value of the monetary unit in terms of wealth. But if the theory is to be of any practical value its relation to changes in economic conditions must be discovered.

We have already examined two particular cases of this general question. We have seen in Chapter I. how the value of the monetary unit might vary without limit, if credit were the sole medium of payment and money did not exist. With a gold currency, limited in amount, we have seen in Chapter II. how an expansion of credit might exhaust the available stocks of cash and precipitate a crisis. Now that we have introduced paper money into the problem we are in a position to attack the general question.

We have just shown that it rests with the banks to increase or decrease the unspent margin of purchasing power. The unspent margin is equal to the cash in circulation, *plus* the assets of the banks, *less* their capital. The assets of the banks are equal to their cash reserves, *plus* the amount of their other assets, such as loans and investments. Consequently the unspent margin is equal to all the cash, whether in circulation or in the banks, *plus* the net interest-bearing assets of the banks.² Assume for the present that the cash remains unaltered. In that case the unspent margin can only be increased or

¹ A *potential*, not an actual, total of wealth. It depends on people's expectations of the purchasing power of their balances, but their expectations are ultimately governed by the prices which rule in the market.

² The assets held against their capital being excluded.

decreased by an increase or decrease in the net interest-bearing assets of the banks. In other words there must be an acceleration or retardation of that process which we have called the creation of credit, the exchange of immediate obligations from the banks to the traders, for obligations at future dates from the traders to the banks.

Let such an acceleration or retardation of the creation of credit occur. What will be its effects? The first thing that requires to be said about it is that no one borrows money in order to keep it idle. The borrowing is done by people in business, who have deliberately relied on borrowing in order at other times to avoid keeping large idle balances. It follows that practically all the sums borrowed will be quickly paid away. Some may be paid away from one trader to another in exchange for goods, and the vendor may apply the money which he receives to paying off an existing debt. But this is not really the creation of new credit at all; it is simply the substitution of one trader's debt for another among the banks' assets. Apart from this shuffling of debts, all the credit created is created for the purpose of being paid away in the form of profits, wages, salaries, interest, rents—in fact, to provide the incomes of all who contribute, by their services or their property, to the process of production, production being taken in the widest sense to include whatever produces value. It is for the expenses of production, in this wide sense, that people borrow, and it is of these payments that the expenses of production consist. So we reach the conclusion that an acceleration or retardation of the creation of credit¹ means an equal increase or decrease in people's incomes.

An increase or decrease in people's incomes will lead to an increase or decrease in their expenditures. The income and expenditure now in question are, of course, *money* income and *money* expenditure, that is to say, the number of monetary units (whether in credit or in money) received or spent. With *real* income, or actual command over wealth per unit of time, we are not directly concerned.

¹ We are speaking here, of course, of the amount of credit created *per unit of time*.

PAPER MONEY AND QUANTITY THEORY 41

Only true income and final expenditure are to be counted; expenditure on the production or purchase of goods for subsequent sale is to be excluded. The income is to be what a man has available to spend on his own needs; the expenditure is to be what he so spends. They may conveniently be called the "consumers' income" and the "consumers' outlay," though it must be understood that "consumer" includes "investor," for investment is one of the purposes on which income may be spent.

The receipts and disbursements of the trader, who buys or produces with a view to sale, may be called the "traders' turnover," to distinguish them from the consumers' income and the consumers' outlay. The trader, of course, gets his true income out of the profits of his business, and this figures in the total of the consumers' income.

If then the creation of credit is accelerated or retarded, the consumers' income is increased or diminished. The consumers' outlay will also be increased or diminished, but not necessarily by an equal amount. The difference between the consumers' income and the consumers' outlay will represent a change in the unspent margin. If a man spends less than he receives, his balance of credit or money will be increased by just that amount. The unspent margin consists of two portions, the traders' balances and the consumers' balances. The traders' balances, being closely regulated, will not be greatly affected by a change in the rate of fabrication of new credit, for a sum which is perceptible in proportion to the consumers' income may be negligible in comparison with the traders' turnover. The extent to which the consumers' balances are affected will depend on the action of the individuals concerned. A man whose income is altered over a period of time might make an exactly equal alteration in his expenditure, or might make no alteration at all. In the former alternative no change would be made in his balances, in the latter the whole change of his income would be absorbed in them. In practice his course of conduct will lie somewhere between these two extremes. A temporary accession of income will be accompanied by some increase of expenditure (which, it must be

remembered, includes investment). A temporary shrinkage of income will be accompanied by some reduction of expenditure. Balances will be in the first case somewhat increased, in the second somewhat diminished.

The presumption is, however, that the change in balances will be relatively small. Where there is an accession of income, the thrifty man will tend to invest his windfall, the unthrifty to spend it. In the first instance, an apparently temporary increase in earnings does not require a reconsideration of the balance to be kept in cash or at the bank, and such increase as occurs is largely casual. Where there is a reduction of income, the prudent man, at any rate, will try to make an equal reduction of expenditure as soon as he can, though it is probably true that adversity reduces balances more quickly than prosperity increases them.

Speaking, for the sake of simplicity, of an acceleration of credit creation only, we see then that the extra credit created in any period, *less* a negligible amount added to traders' balances, is paid away as an addition to the consumers' income for that period. This addition to income is applied to a small extent to increasing the consumers' balances, and to a much larger extent to swelling the consumers' outlay for the period. But the consumers' outlay represents the demand for goods. If it is increased, that means that more goods are sold, and that the receipts of the retailers and others who sell to the consumer are swollen, and their stocks are encroached upon. Like other traders they are unwilling to hold idle balances, and their additional receipts are applied either to paying off indebtedness or to buying fresh stocks of goods. In the latter alternative the dealers from whom they buy will probably pay off loans, so that it may be taken as broadly true that the consumers' outlay is applied to paying off indebtedness. Therefore the effect of an acceleration of credit creation is likely to be very largely offset by the consequent increase in the consumers' outlay and the discharge of indebtedness by the dealers from whom the consumers buy.

But at a given level of prices the increase in the consumers' outlay means an increase in the consumption of goods. How

PAPER MONEY AND QUANTITY THEORY 43

is this increased consumption to be provided for? Up to now we have supposed the creation of credit to be accelerated, without inquiring why or how. The creation of credit is in the hands of the banks, and if they want traders to borrow more they must encourage them to do so. Traders borrow to purchase and hold stocks of goods or securities, and bankers encourage them to increase these stocks, and so to increase their borrowing, by lowering the rate of interest. But in so far as the effect of the increased borrowing is to swell the consumers' outlay, the stocks of goods and securities in the dealers' hands are depleted, and further orders have to be given to the producers to replenish them. These further orders need further loans to finance them; as output expands, credit expands, and with it the consumers' income and the consumers' outlay. Now output cannot be increased without limit, and as the demand for fresh goods presses against the productive resources of the community, prices rise. Retail prices rise because stocks are being depleted and cannot be quickly replenished; wholesale prices rise because producers are besieged with orders that they cannot fulfil. As prices rise, the quantity of credit needed to finance a given consignment of goods increases in proportion, and the creation of credit is still further accelerated.

Now the greater the proportion of the additional credit that goes to swell the consumers' outlay and the less the proportion that is added to the consumers' balances, the greater will all these effects be. A superficial interpretation of the quantity theory would lead us to lay all the stress on balances, and to say that prices ought to increase in proportion to the unspent margin, i.e. to the quantity of credit and money in the hands of the people. But now we see that the more *slowly* this quantity increases, the greater will be the rise of prices, so long as the acceleration of the creation of credit continues. When the process is completed, when the banks no longer seek to encourage borrowers, and the credit created no longer exceeds the credit extinguished, then the unspent margin will again become the measure of prices. If equilibrium supervenes and the economic conditions that existed

before the disturbance are approximately reproduced, it will then be approximately true that prices and all money values will have changed in proportion to the quantity of purchasing power (though this is in any case subject to the qualification that some money values are absolutely fixed either for a period or in perpetuity, such as debenture interest, rents, etc., and others are fixed by custom).

In the same way, when the creation of credit is retarded, the more slowly the unspent margin contracts, the greater will be the fall of prices. To make this rather intricate part of the subject clear it will be well to sum up the results at which we have just arrived.¹ The consumers' income rises and falls with the amount of new credit created; the consumers' outlay with the consumers' income; the credit extinguished with the consumers' outlay. But the changes in these several quantities do not *exactly* keep pace. The difference between any two of them represents a change in balances. The change in the *traders'* balances, due to a discrepancy between the changes in the new credit created and the consumers' income or between the changes in the consumers' outlay and the credit extinguished, is likely to be small. The change in the consumers' balances may be relatively considerable, since they have not the same facilities as traders for economising balances.

Money is borrowed for production, and a change in the rate of creation of new credit is in the first instance a sign of a corresponding change in the rate of production of wealth. But output cannot be increased, and will not be decreased, indefinitely. An increase or decrease in the orders to producers is quickly reflected in an increase or decrease of wholesale prices.

The consumers' outlay in being applied to the extinction of traders' indebtedness produces a depletion of traders' stocks. The volume of new orders to the producers rises and falls with the rate of depletion of these stocks, and the amount of new credit created rises and falls with the volume of new orders and the general level of prices. Thus is the cycle completed. The banks take measures to expand or contract credit as the

¹ See also the note at the end of this Chapter for a statement of these results in algebraic notation.

case may be. From the point of view of the trader, borrowing is an incident of the process of holding stocks of goods, whether in course of manufacture, or in transit, or awaiting sale. If he is induced to borrow either more or less, this really means that he is induced to hold greater or smaller stocks. But when he takes steps to adjust his stocks and his indebtedness by giving greater or smaller orders, the cycle of changes is started, and the effect on stocks and indebtedness on the whole is limited to the *difference* between the change effected in the amount of credit created at one end and the change in the amount of credit extinguished at the other, after this credit has circulated through the various stages which we have seen. This difference is the comparatively small amount which is waylaid and left behind in balances. The banker sees the whole process from the point of view of his balance-sheet. He sees the credit expansion or contraction begin in the applications for loans; after a short interval he sees it to a great extent offset by a similar change in the repayment of loans. The change in the bank credits which make up his liabilities, is equal to the change in the loans which make up his assets. The choice as to how much of the new credit created shall be kept in balances (whether as money or as credit) and how much spent, rests entirely with the consumers themselves.

Upholders of the quantity theory of money have sometimes been led to argue that prices ought to rise and fall regularly with the quantity of money and credit in being. The theory has been as often attacked on the ground that experience shows us many examples of prices rising when the quantity of credit and money falls, and *vice versa*. The arguments on both sides betray a misconception of the theory. It is indeed sometimes the case that, when prices show a marked rise, there is not at any rate a proportionate increase in the bankers' liabilities, whether deposits or note issues. That occurs at one of these transition periods when credit is expanding. Fluctuating incomes, whether derived from wages or profits, dividends or fees, are swollen by the flood of new credit, but the balances retained in hand by the recipients of

these incomes are not immediately increased up to the proportion to which they would approximate with the same incomes in a state of equilibrium. Thus it is only at times of equilibrium, when the quantity of credit and money in circulation is neither increasing nor decreasing, that the relation of prices and money values to that quantity of credit and money is determined by the individual's considered choice of the balance of purchasing power appropriate to his income. At all other times one of the most important of the economic conditions which the quantity theory takes to be "given" will be an acceleration or retardation in the creation of credit. In practice it seldom, perhaps never, happens that a state of equilibrium is actually reached. A period of expanding or contracting credit, when it comes to an end, leaves behind it a legacy of adjustments, and before these are half completed a new movement has probably already set in. Therefore when drawing guidance from the quantity theory in the examination of actual conditions, we must beware of assuming too easily that, in a country where economic organisation has remained substantially unchanged, prices will go up and down in strict proportion to the quantity of purchasing power in circulation. Before making any such assumption we must first ascertain whether credit is expanding or contracting.

In one respect, however, this tells rather for than against such practical applications of the quantity theory; for at any rate we may be sure that when the quantity of purchasing power in circulation increases or diminishes the corresponding changes in prices and other money values do not lag behind.

It must be clearly understood that such applications of the quantity theory do not come within the four corners of the theory itself. That theory is not in strictness concerned with varying conditions at all, but merely with the determination of the value of the monetary unit when *all* other conditions are fixed. But there is a form of the quantity theory which is so devised as to take account of changing conditions. According to this, the quantity of purchasing power in circulation is only one among several factors, the others being the average rapidity of circulation of money and credit, and

PAPER MONEY AND QUANTITY THEORY 47

the volume of transactions. Over any period of time the total quantity of credit and money, multiplied by the average number of times every unit of credit or money has changed hands in the course of business, must necessarily be equal to the total value of all the transactions in which credit or money has passed. Here we have a formula which is applicable without reservation to varying conditions. It is subject, however, to the disadvantage that some of the quantities it employs are not themselves of any separate importance in economics. Among the transactions in which money has passed are many into which the use of money or bank credits enters quite capriciously. It is a matter of chance whether a particular purchase of goods or securities is paid for by cheque or by way of a book credit, and if it is paid for by the latter method the debtor may for the moment actually keep a larger balance at his bank by reason of the undischarged liability than would otherwise be needed. In the aggregate of transactions the gross total of business transactions, where goods or securities are bought in order to be sold again, will count for enormously more than the expenditure of the private individual. The disbursements of the private individual are made out of his income. The turn-over of the trader may be many times greater than his income, and his bank balance is far smaller in proportion to his turn-over. Thus the total of transactions for the purpose of this version of the quantity theory is arrived at by adding together two quantities, the consumers' income and the traders' turn-over, which for other purposes are totally unlike. The traders' turn-over counts for far more in the total than its actual share in determining the quantity of purchasing power in circulation would justify, and its amount is affected by capricious and uncertain factors.¹

And the rapidity of circulation of money or credit is not a phenomenon which enters directly into anyone's experience. The best way to estimate the rapidity of circulation of a man's

¹ In applying the quantity theory in this form, Prof. Kemmerer finds that wages represent only 3 per cent. of the total of money transactions ("Money and Credit Instruments in their Relation to General Prices," p. 136). Prof. Irving Fisher accepts the same estimate ("Purchasing Power of Money," p. 226). Wages would probably be nearly half the consumers' income.

money is to calculate the proportion of his total payments in any period of time to the average balance held by him during that period. His balance is a matter of practical moment to him; he has to devote some care and thought to regulating it; consequently we can tell what circumstances and what motives are likely to affect it and how; whereas if any circumstances affect the rapidity of circulation of money it can only be indirectly, by affecting balances.

Therefore little is gained by introducing these two factors, the total money transactions and the rapidity of circulation, into the quantity theory. It is better to limit the rigorous theory to the bare arithmetical relation between the unit of value and the quantities measured by it, and to approach the more complex problem presented by the variation of the economic conditions from the standpoint of the influences which may affect balances of cash or credit.

We have been assuming that cash and credit may be treated merely as different but interchangeable forms of purchasing power. Practically all the purchasing power comes into existence in the form of credit, and, though it may be transmuted into cash in its passage through the hands either of poor men who have no banking account, or of rich men who require pocket-money, it resumes the form of credit to be extinguished. Nevertheless, while the circulation of money is thus dependent on the circulation of credit, there is a sense in which it is the circulation of credit which is determined by the circulation of money. Credit implies the liability of banks to pay money on demand, and the banks must maintain reserves of cash to ensure that they shall always be able to discharge this liability. As has already been mentioned, it is the general practice of banks to aim at maintaining their cash reserves in a fixed proportion to their demand liabilities, and this practice operates to limit the amount of credit created to that for which the cash in circulation will be sufficient to provide the proper reserves. If the banks create credit in excess of this limit, not only do their existing reserves cease to bear the usual proportion to their demand liabilities, but as the extra credit passes into circulation, stimulating trade and

PAPER MONEY AND QUANTITY THEORY 49

driving up prices, more cash passes into circulation too, and the reserves are not only relatively but absolutely diminished. And at a time when the reserves are in the requisite proportion, if the supply of cash is diminished, for example by the withdrawal and cancellation of a certain amount of legal tender paper, the proportion will be disturbed and the banks, if they are to restore it, must restrict the creation of credit. Such a withdrawal of currency will in the first instance affect only the bank reserves, since the customers of the banks have the right to draw out as much cash as they please within the limits of their credits, and the requirements of the public for cash only change gradually.

The note-issuing authority which regulates the supply of legal tender paper money is really dependent upon the control of credit for passing the notes into circulation. It may increase or diminish the supply of paper money, but the quantity in the hands of the public, and the value of the monetary unit will be little affected unless the banks proceed to increase or diminish the supply of credit. Of course so long as the banks adhere to the recognised practice of preserving a fixed proportion between their cash reserves and their liabilities, they will always tend to take the appropriate action. But they may not choose in all circumstances to observe this practice, or they may fail to carry it out effectively. The note-issuing authority can do little more than give them the signal to expand or contract credit, and must rely on them to take the necessary measures. It is their action, not the note issue, which directly affects the value of the monetary unit.

The note-issuing authority may of course be a Government directly defraying its own liabilities with notes fresh from the printing press. When first issued they swell the consumers' income, exactly like so much credit created by the banks for the needs of commerce. And it may be that the banking system is so little developed that the notes do not come back to the banks as they are spent. If the traders who sell to the note-holders keep their cash in the form of notes in their strong boxes rather than in the form of bank credits, the notes accumulate in these strong boxes. The traders spend them on replenishing their stocks, and so they get paid away again

to those engaged in production without ever passing through the banks. The paper money once issued circulates, and circulates with sufficient rapidity to maintain the appropriate increase of prices. Under such a system there is no provision for withdrawing notes unless the Government sets to work to raise the necessary sums from the public by taxes or loans. For this reason it has usually been found convenient to combine the control of a paper currency with some national control over the supply of credit. The best organ of Government for this purpose is a State Bank, or else a central bank which, while not itself a part of the Executive Government, is willing regularly to co-operate with it. Such a bank can regulate the paper currency on banking principles. It will have a balance sheet like that of any other bank, its liabilities including (along with ordinary deposits) the legal tender notes issued, while its assets, apart from its gold reserves, will consist chiefly of short period loans. Day by day notes will be issued (just as credits are created) by way of advances to traders and others, and day by day notes will be returned from circulation in payment of past advances. By encouraging or discouraging borrowers, and especially by varying the rate of interest, the central bank can expand or contract the stream of fresh notes. If it increases its advances, so that both sides of its balance sheet are increased, the additional notes issued, in so far as they are not immediately needed for circulation, go to swell the cash reserves of the other banks. If it contracts its advances, the additional notes withdrawn, in so far as they are not extracted from circulation, are taken out of the other banks' cash reserves. The fact that banks must maintain adequate reserves of legal tender money to ensure that they can meet their demand liabilities, while legal tender money can in the last resort be obtained only by borrowing from the central bank, gives the central bank great power of control over credit. The market rate of interest will always tend to approximate to the rate charged by the central bank, the "bank rate" as it is called. The market rate can never be appreciably higher than the bank rate for a borrower of given standing, for otherwise borrowers would all have recourse to

PAPER MONEY AND QUANTITY THEORY 51

the central bank, which can give them legal tender money, while the other banks will only give them credit based on the same legal tender money.

The bank rate may no doubt be appreciably higher than the market rate for a time, if it happens that there is more legal tender money in circulation than the circumstances require. In that case the banks would find themselves with larger cash reserves than they think necessary to support their demand liabilities, and would tend to offer loans at low rates. But even so, there would be little or no borrowing from the central bank, and there would be a steady diminution in the legal tender notes in circulation, as loans and bills matured, till at last the other banks would find their reserves falling short, and would be driven to borrow from the central bank to replenish them. When the cash reserves on which the banks' credit operations are built up are all borrowed at bank rate from the central bank, the market rate will not be far below the bank rate. If the central bank wishes to force up the market rate (in order perhaps to restrict a tendency to create excessive credits) it can come itself into the market as a borrower. By borrowing at the market rate it can withdraw as much legal tender money as it pleases from the other banks, and they must either raise the market rate at least to a level with the bank rate, or else run the risk of having to borrow back at the bank rate what they have lent at a lower rate. In practice, under this system the lending operations of the central bank take the form chiefly of loans to the other banks; indeed, the regulations under which the central banks of some countries lend, requiring the endorsement of a banker or substantial financial house as a *sine qua non*, practically limit them to this. It is obvious that a central bank, which advances to the other banks, at what rate of interest it pleases, the cash necessary to provide their reserves, holds a very commanding position. Especially is this so in a country where deposit banking is not developed to its fullest extent, and where, as in most countries on the continent of Europe, cheques are little used except for large payments between business men. In such conditions many of the traders who

borrow from the ordinary banks want legal tender notes, and for them the banks will act practically as intermediaries for the purpose of obtaining advances from the central bank. Thus the credit operations of the central bank form a very substantial part of those of the whole country.

We can now see what are the essential factors in the regulation of a paper currency. Its value depends on the quantity issued. The greater the number of monetary units in circulation, the less, other things being equal, will be the value or purchasing power of the unit. An increase or decrease in the amount in circulation has, as we have seen, many complex reactions besides the tendency to produce an inversely proportional change in the value of the unit, but whatever allowance has to be made for these reactions, we can still say that, except so far as the issue of paper money is regulated and limited, the value of the monetary unit is just as liable to be indefinitely depreciated as under a régime of pure credit unsupported by money.

The only effective method of controlling the issues of paper money is to control the creation of credit, for the demand for legal tender money for circulation is consequential upon the supply of credit. Hence the need for a central bank of issue. Inevitably a central bank with a monopoly of a legal tender note issue must be subject to carefully devised legal or at any rate administrative restraints. Indeed, it goes without saying that the sole right of manufacturing the medium in which debts may be lawfully discharged cannot be lightly handed over to a private institution or even to a State Bank. The actual limitations imposed on this right must be so devised as to guard the community against the various disorders which may arise from an imperfect standard of value or medium of payment. At the present stage, however, we are hardly ready to consider in detail the different kinds of limitations to which the right of issuing legal tender notes may be subject. Before we can do so, we must deal with the foreign exchanges, a subject of the utmost importance in the theory of credit and currency.

NOTE TO CHAPTER III.

The relations between the rate of creation of credit, the consumers' income and outlay and the unspent margin are so intricate that some readers will find them easier to understand if algebraic symbols are used.

Suppose a state of monetary equilibrium, in which credit is being created and extinguished at exactly equal rates, and the consumers' income and consumers' outlay are also equal. Let A be the amount of credit created per unit of time, and B the consumers' income. Let M be the unspent margin, and let T and C be the portions of it in the hands of traders and consumers respectively, so that $M = T + C$.

Next let A be increased to $A + a$, and let the consumers' income become $B + b$, the consumers' outlay (hitherto equal to B) $B + b'$, and the credit extinguished (hitherto equal to A) $A + a'$.

If all the additional credit, a were paid away, the consumers' income would be $B + a$. The difference between a and b is accounted for by the sum which traders borrow but do not pay away, and which is therefore added to their balances. After an interval of time t , the credit created will have been $At + at$. The consumers' receipts will have been $Bt + bt$. Traders' balances will have been raised from T to $T + at - bt$. The consumers' outlay is $B + b'$; in time t they will have spent $Bt + b't$ and their balances will have been increased by $bt - b't$, and will stand at $C + bt - b't$. The traders will have received $Bt + b't$ from the consumers, and will have discharged indebtedness to the amount of $At + a't$. Their balances will have been further increased by $b't - a't$, and will stand at

$$T + at - bt + b't - a't.$$

The consumers' balances are

$$C + bt - b't.$$

Consequently the unspent margin as a whole, being the sum of these two, is

$$C + T + at - a't,$$

$$\text{or } M + at - a't.$$

In fact, as must obviously be the case, the unspent margin is increased by the excess of credit created over credit extinguished.

Next we pass to the consequential changes in production and consumption. We take the production and consumption of wealth each to be equal in the first instance to X . This is a *quantity* of wealth per unit of time (rather an artificial conception, inasmuch as there is no one unit of quantity applicable to all forms of wealth). If P be the average of prices, PX is the money value of X . Now $PX = B$, since all incomes may be assumed to arise from production, whether they are the reward of services or fees paid by way of interest or rent for the use of property, and all costs of production are someone's income.

It may be supposed that the increase in credit created from A to $A + a$ is for the purpose of increasing stocks of goods.

Let production be increased from X to $X + x$. Then if prices have not yet risen we have

$$B + b = P(X + x),$$

and

$$b = Px.$$

If the consumers' outlay, $B + b' = P(X + x')$, then $X + x$ represents the quantity of wealth consumed in unit time. In time t the stocks of goods will have been increased by $(x - x')t$. If S be the original stocks, this will have been raised to $S + xt - x't$. The value of the stocks will have been raised from PS to $PS + Pxt - Px't$ or $PS + bt - b't$.

Traders' indebtedness has increased by $at - a't$, while the value of their stocks has increased by $bt - b't$. The difference $(at - a't) - (bt - b't)$ is the amount by which traders' *balances* have increased; it is in fact the extra amount which they have borrowed but have not spent. It is probably small, and might be *nil*, since people do not borrow money to keep it idle.

But presumably production cannot be raised from X to $X + x$ without offering some inducement, in the shape of increased prices, to the producers. If prices rise to $P + p$, then

$$B + b = (P + p)(X + x)$$

$$B + b' = (P + p)(X + x')$$

$$b = pX + (P + p)x$$

$$b' = pX + (P + p)x'$$

$$b - b' = (P + p)(x - x').$$

Traders increase their borrowing from A to $A + a$ in order to increase their stocks. The actual effect on their stocks is diminished because (1) when they spend an additional amount, b , on production,

the expenditure of the people who receive this sum is increased by δ , and the net increase in stocks is only to the value of $b - b'$, and (2) the pressure of the additional orders upon the productive resources of the country takes effect only partially in an increase of output from X to $X + x$, and for the rest spends itself in an increase of prices from P to $P + p$. The actual increase in stocks in time t is therefore only $\frac{bt - b't}{P + p}$. If this is small, if δ is not much less than b , and if p is considerable, the desire of traders to increase their stocks is proportionately unsatisfied, and the flow of new orders is proportionately maintained.

But now that prices have been raised to $P + p$, it is necessary to borrow more merely to maintain the old rate of output, X . In order to maintain the new rate of output, $X + x$, the rate of creation of new credit must be sufficient to provide expenses of production to the amount of $(P + p)(X + x)$.

The increase of prices is immediately due to the pressure of the dealers' demands on the producers, a pressure which will continue so long as the desire of the dealers to obtain additional stocks remains unsatisfied. This desire it is hardly possible to measure by any precise mathematical formula. A fall in the rate of interest or a prospect of rising prices induces traders to add to their stocks; a rise in the rate of interest or a prospect of falling prices induces them to let their stocks run down. In so far as the augmentation of credit spends itself in an increase of prices instead of an increase of production, and in so far as consumption keeps pace with production, the inducement to go on making demands on the producers continues unabated, and may even be stimulated.

The check to this process of expansion of course comes from the banks. The assets of the banks are composed of loans, bills and investments = L , and cash = R . If their liabilities be D , then $L + R - D$ = their capital, which we may suppose fixed.

The effect of the increased creation of credit is to raise both L and D by $at - a't$. If F be the amount of legal tender money in the country, of which $F - R$ is in circulation, the unspent margin $M = D + F - R$. This is raised to $D + F - R + at - a't$. But as the unspent margin increases, the portion of it held in the form of money will tend also to increase. Suppose that it increases by h . Then the banks' liabilities are $D + at - a't - h$, and their reserves of cash are $R - h$. Here h is of course less than $at - a't$, and therefore larger liabilities are supported by smaller reserves,

CHAPTER IV.

THE FOREIGN EXCHANGES.

We have seen that the medium of payment used in the larger transactions of trade is not money but credit. Credit only requires to be transformed into legal tender money for the payment of wages, or for making small retail purchases, paying railway fares, etc. Though in law a debt is payable in money, in practice all debts of any importance gravitate to the bankers' books, where, instead of being paid in money, they are for the most part set off against one another. The process is a simple one where debtors and creditors are customers of the same bank ; it is a simple one still where debtors and creditors deal with different banks which settle through the same clearing-house. But where debtors and creditors deal with banks in different countries, having different currencies, the mechanism of settlement becomes exceedingly complicated.

Raw materials may be produced in one country, sent for the first stages of manufacture to a second, completed in a third, carried, in the ships of a fourth, to a wholesale dealer in a fifth, and perhaps passed on by him to yet another before the final product reaches the consumer. All the people who have handled the goods, worked upon them, carried them, bought them and sold them, must receive their remuneration or their profit. Their remuneration and their profit must somehow or other be provided from the payments received from the consumer. But everyone concerned wants to receive the sum due to him in his own country, where his liabilities are due ; it is no use to anyone to be given a credit in the country where the goods were ultimately sold if he does not live there ; before such a credit can meet his needs it must be exchanged for a credit in his own country,

The trader whose business is carried on entirely in his own country finds that he is the debtor of some of his fellow-countrymen and the creditor of others. If he draws cheques in favour of the former and receives cheques drawn in his favour by the latter, all his debts and credits become an affair between himself and his banker, and they are reduced down into a net credit or debit balance. For this simplification it is essential that the debts and credits should be homogeneous; they must be reckoned in the same unit. A debt for forty shillings can be set off against a debt for £2 because a shilling merely means one-twentieth of £1. An undertaking to deliver 100 kilogrammes of gold can be set off against an undertaking to deliver 3215 ozs. Troy, because these are equal weights of the same commodity. But an undertaking to deliver £10,000 in Exchequer Bonds cannot be set off against a debt of £10,000 until the value of a bond in cash has been settled by a bargain between the parties. Nor can 1000 ozs. of gold at Capetown be set off against 1000 ozs. of gold in London except by such a bargain. Gold at Capetown is not the same thing as gold in London, any more than cotton at New Orleans is the same thing as cotton at Liverpool.

Debts in different countries are as heterogeneous as commodities in different countries; £10,000 in Capetown is something quite different from £10,000 in London. The fact that each is transformable into precisely the same quantity of gold, and that the gold can be sent at moderate expense from either place to the other, does not alter this, though it keeps the variations of the value of either debt in terms of the other within narrow limits. A credit in Capetown is the means of making payments in South Africa; a credit in London is the means of making payments in England. Each credit therefore gives a command over wealth in the region where it is due. This is the real basis of its value; convertibility into gold is merely a device adopted to steady the purchasing power of the monetary unit.

To provide the facilities needed for effecting settlements among traders who have become possessed of credits in different countries, there exists a class of dealers in what is

called "foreign exchange". In the foreign exchange market are settled the terms on which credits in one country are to be exchanged for credits in another. The dealers must have establishments in each of the centres at which they deal. A dealer who is not himself a banker will keep a credit balance at some bank at each centre. People who want to remit money—that is to say, to obtain a credit in one of these places in exchange for a credit in another—will pay over the credit into his account at the latter place, and he will pay out the stipulated equivalent from his account at the former. At each centre his balance will be increased or diminished according as the remittances from it are greater or less than the remittances to it. If the exchange dealer is himself a banker, he can *create* credits in favour of those who wish to remit to any centre, and his demand liabilities will be increased or diminished according as the remittances to the centre are greater or less than the remittances from it.

Whether he is a banker or not, he will be unwilling to let an inequality of remittances continue indefinitely. If he is a banker, he will not want his demand liabilities in any place to grow out of proportion to his assets realisable in the same place. If he is not, he will not want his credit balances at any of his places of business to be either inconveniently depleted or inconveniently swollen.

Now between any two centres the *demand* for remittances in one direction constitutes the *supply* of the means of remitting in the other. A disparity between them is simply a sign that supply and demand no longer balance. In this as in all other trades a failure of equilibrium between supply and demand is corrected by an adjustment of price. If the exchange dealers are receiving greater sums than they pay at any centre, they offer less in other centres in exchange for a credit there; if they are paying greater sums than they receive, they offer more. In other words, in the former case, having too much credit in the centre in question, they make it cheaper in terms of foreign currencies; in the latter, having too little, they make it dearer. When the value of the monetary unit in foreign currencies falls, the exchanges are said to become

"unfavourable"; when it rises, they are said to become "favourable".

It would seem to follow, and in a sense it is true, that the foreign exchanges are determined by the demand and supply for remittances. If as the result of the economic relations between two countries there is an uncovered balance of indebtedness due from one to the other, there will be a demand for remittances from the debtor nation to the other in excess of the demand for remittances in the opposite direction, and the exchange will become unfavourable to it. The whole theory of the foreign exchanges is commonly explained by reference to this fact. In reality, however, it is not an altogether satisfactory account of the matter. In any kind of market movements of price are determined by the state of supply and demand. If prices rise, that is because the supply falls short of the demand; if they fall, that is because the demand falls short of the supply. The level towards which prices always gravitate is that at which supply and demand are equal. But when we come to examine any particular market, this general law tells us very little about how the equilibrium price is determined. The excess or deficiency of the supply as compared with the demand is merely a *symptom* of a maladjustment of price; it is no more than evidence that the price is too high or too low. And this is true of the foreign exchange market. If there is an excess of remittances in one direction over remittances in the other, that is a sign that the rate of exchange is not at the equilibrium point, but this does not throw any light on the conditions which determine where the equilibrium point is.

So far as readily transportable commodities are concerned, all the different countries of the world form a single market. The buying capacity of each country consists of its consumers' outlay. But each country of course reckons its consumers' outlay in its own currency, and in order to measure the country's purchasing power in the world's markets, its currency must be expressed in terms of foreign currencies. The purchasing power of a given consumers' outlay in the world's markets will be directly proportional to the foreign exchanges.

The more favourable the exchanges, the greater will be the share of wealth acquired by a given consumers' outlay. Or, to put the same thing in another way, the greater the value of the consumers' outlay in terms of foreign currencies, the more attractive will be the market offered by the country to foreign goods.

But the share to which the country is *entitled* in the world's markets is measured by the products which it contributes. The value of those products in foreign currencies will be determined by world prices, and their value in the home currency will be *inversely* proportional to the foreign exchanges. The more favourable the exchanges the *less* will be the value of the country's products¹ in its own currency.

It is easy to see therefore that, if the exchanges are more favourable than the circumstances justify, a disparity will be caused between the country's purchases and sales in foreign markets, and there will be a balance of indebtedness to be discharged. And in the same way, if the exchanges are unduly unfavourable, there will be a balance of indebtedness from abroad. The rate of exchange which will just maintain equilibrium is that multiplier which will make the purchasing power of the consumers' outlay precisely equal to the world value of the country's products. It follows that any change in the consumers' outlay should (other things being equal) produce an inversely proportional change in the exchanges. It also follows that any change in the world value of its products, should produce a corresponding change *either* in the consumers' outlay, *or* in the exchanges.

The foregoing exposition is subject to an important correction. It is not only the liabilities in respect of the export and import of physical products that have to be settled through the foreign exchanges. The equilibrium required is in respect of *all* liabilities, from whatever transactions they may arise. They may arise from services rendered; brokers or agents may be employed in one country on the business of

¹ This is only true of products which have an international market, i.e. those which are readily transportable.

another ; the ships of one country may carry goods for the merchants of another. Liabilities may arise from past investments ; the capitalists of one country may possess property or securities in another, and may be entitled to draw interest, rents, profits, dividends, etc., therefrom. And *new* investments create liabilities from the lenders to the borrowers ; he who invests in a foreign country takes upon himself the liabilities to send thither the capital sum invested ; in other words, foreign securities have to be paid for as much as foreign goods.

Consequently the purchasing power properly assignable to a country in the world's markets is not correctly measured by the value of the products it sells, but by the net amount of all the payments due to it. Equilibrium does not require an equality of exports and imports ; it requires an excess of exports or an excess of imports just sufficient to cover the balance of other payments due to or from other countries, as the case may be. A country which is receiving £20,000,000 a year in interest on foreign securities and £10,000,000 for shipping freights and services rendered, and is investing £12,000,000 a year abroad, would receive an excess of imports over exports amounting to £18,000,000 a year. To maintain equilibrium its market must be just so attractive as to bring in this excess of imports and no more. In other words, the rates of exchange must be fixed at the point at which the consumers' outlay has precisely this amount of purchasing power in excess of the world value of the country's products. When *any* of the conditions change, whether it be the country's output, the balance of other payments, or the consumers' outlay, the foreign exchanges must be adjusted.

For example, suppose that there is a decline in the output of commodities, such as might be due to a failure of the harvest in a grain-exporting country. In that case the effect on the foreign exchanges appears to be as simple and direct as possible. One large item being dropped out of the total of payments due from abroad, the equilibrium is destroyed and the exchanges must become unfavourable. But a closer scrutiny will show that the matter is not so simple as this.

For the immediate effect of the failure of the harvest is to diminish the income of the agricultural population. If the remainder of the population receive the same income as before, the consumers' income will be diminished by an amount equivalent in value to the shortage of the harvest. It would seem to follow that, even if there be no change in the foreign exchanges, the purchasing power of the country will be just so far diminished as to keep the equilibrium undisturbed. To the extent that the decline in purchasing power is not felt in the demand for imported goods, it will affect the market for home products, and they will tend to be diverted to export. Or alternatively, if the home producers cannot find relief in an increased export trade, they in turn will suffer a diminution of income.

Why then does a failure of the harvest lead, as it usually does, to an adverse movement of the exchanges? The answer is to be found in the fact that a diminution of the consumers' income does not immediately cause an equal diminution of the consumers' outlay. In so far as the farmers, labourers, land lords, and others, who suffer by the failure of the harvest, spend their balances of ready money, their outlay exceeds their income. To this extent the equilibrium will be upset, and, so long as balances are being drawn upon, the exchanges will be unfavourable. The consumers' income being reduced, the unspent margin will be excessive until it is reduced in proportion. The ulterior effects depend very much on the currency system in use. If a paper currency is used, with no metallic basis, the foreign exchanges are free to move upwards or downwards without limit. In that case the effect of the reduction of the amount of money and credit in the hands of the agricultural population will be to increase the cash in hand and to diminish the demand liabilities of the banks. The cash cannot be exported, and must remain in the banks, till they can induce a renewed demand for it for internal circulation. The banks will naturally take steps to stimulate the creation of credit until the normal proportion is restored between their cash holdings and their liabilities. In so doing they will increase the consumers' income and will intensify and prolong

the unfavourable condition of the exchanges till a good harvest comes round and restores the country's productiveness.

On the other hand, if the country is one of a group all using a gold standard, the foreign exchanges within the group can only vary within narrow limits. If in any two countries credits can at all times be obtained in exchange for gold, and gold for credits, at a prescribed price, a credit in one country can be transformed into an equivalent credit in the other at no more than the cost of sending the value of the credit in gold from one to the other. If too high a price is asked in the exchange market for credits in one country in terms of credits in the other, traders will resort to this alternative method of remittance by sending gold. Thus the rate of exchange oscillates between an upper and a lower limit. The limit at which it becomes more profitable to export gold than to buy foreign credits is called the "export specie point"; the limit at which it becomes more profitable to import gold than to sell foreign credits is called the "import specie point". The intervening point at which the rate of exchange just represents the relative amount of gold in the two monetary units is called the "par of exchange". The cost of sending any considerable sum of gold, including freight, insurance, and interest for the period of the voyage, is small in proportion to the value of the gold. In time of peace it would scarcely exceed one per cent. for the longest voyage and in most cases would be one-half per cent. or less, though in time of war the insurance against war risks and the various restrictions on international intercourse may make it much higher. The result is that, in time of peace at any rate, the causes which tend to make the foreign exchanges favourable or unfavourable display their chief effects in imports and exports of gold. In the case of a failure of the harvest, if the consumers' income shrinks exactly in proportion to the country's productiveness, the uncovered excess of imports to be paid for is just equal to the sums drawn by the agricultural population from balances. A portion of these sums will be cash returning from circulation to the banks; a portion will be credit. The cash portion is available for export as fast as it accumulates, without disturbing

the position of the banks. The credit portion, being paid of course to dealers who sell commodities, etc., to the distressed farmers, will be applied in reduction of the indebtedness of these dealers. There will also be a further reduction in the volume of credit, for the dealers in grain, finding less to buy, will borrow less. Credit will therefore contract of itself, and the banks will be enabled to release a corresponding amount of gold for export. In this case therefore there is no inducement to the banks to stimulate the creation of credit. The diminished output of the country requires a smaller consumers' income, and a smaller basis of gold and credit. The redundant credit is extinguished, the redundant gold is exported, and equilibrium is quickly regained.

To pass to another illustration, suppose that the equilibrium of international payments is disturbed by a borrowing operation, or a capital issue in one country to provide funds for an enterprise in another. Credits are brought together in the former from the subscribers of the loan, and are placed at the disposal of the borrowers, who must exchange them for credits in their own country before they can use them.

Here again one is tempted to say that the effect on the foreign exchanges is so obvious and direct that no further explanation is wanted. There is a new demand for remittances one way, and there are no corresponding remittances the other way to supply it; the exchange must become favourable to the borrowing country. The ultimate result must be a restoration of equilibrium. But where will the new point of equilibrium be?

The essence of the lending operation is that the purchasing power represented by the sum lent is as it were transplanted from the lending to the borrowing country. The consumers' income of the former is diminished, and the consumers' income of the latter is increased, by this amount. The borrowing country thereby becomes entitled to a greater share in the world's products, and in order actually to obtain this greater share it must be made a more attractive market. Accordingly the rate of exchange moves in its favour. If it has a paper currency with no metallic basis, the favourable tendency of

the exchange will continue up to the point at which the value of the consumers' outlay in the world's markets is sufficient to secure an excess of imports equivalent in value to the sum borrowed. When that condition is reached, the loan is really being sent from lender to borrower in the form of *wealth*, the receipt of which sets free the productive resources of the borrowing country for capital enterprises instead of the supply of consumable goods.

But of course this favourable movement of the exchanges is only necessary if the consumers' outlay remains unchanged. The increase in the country's command over wealth could be effected just as well by expanding the consumers' outlay and keeping the exchanges at par. For example, the promoters of the capital enterprise, or the contractors employed by them, might be financed by bank advances in their own country in anticipation of the proceeds of the loan. The bank credits so created, being paid away in the expenses of production, would swell the consumers' income.

If the only legal tender money is paper, and the supply of this medium is limited, the banks cannot afford to let credit expand unduly. If, on the other hand, the borrowing operation takes place in a gold-using group, then if in the first instance the banks are too cautious to let credit expand, gold will be imported. The supply of legal tender money being thereby augmented, credit can safely be extended, and when the stimulation of credit has raised the consumers' income and the consumers' outlay to the requisite level the exchanges will drop to par, and the importation of gold will stop. When extra imports to the total of the loan have been obtained, the consumers' outlay must return to its former level. The surplus gold will then be exported again.

This importation of gold by the borrowing country is a well-recognised phenomenon. It would be wrong to interpret it as a payment of the loan or of part of the loan in gold. The true function of the gold is to enable the banks to suffer an expansion of credit which would otherwise upset the proportion of their cash reserves to their demand liabilities. If the banks were willing to acquiesce in the reduction of this

proportion, the gold need not be imported at all. And in any case, when the movement of capital is completed, the gold is returned, so that on balance the borrower receives no gold, and all the proceeds of the loan are received in goods or services.

Yet a third example of a disturbance of the equilibrium of the exchanges is to be found in an expansion of credit. An expansion of credit, as we saw in the last chapter, increases the consumers' income and the consumers' outlay. It is also accompanied by some increase in the production of commodities. But the consumers' outlay quickly outstrips production, and there follows pressure on the country's productive capacity, which causes a rise of prices. This disproportionate increase in the consumers' outlay makes the country a more favourable market for the sale of foreign goods so long as the foreign exchanges remain as they were. Imports are increased, exports diminished. The exchanges have therefore to be so adjusted as to reduce the purchasing power of the consumers' outlay to the point at which the equilibrium of payments is restored. If the country and its neighbours have gold currencies, the exchanges are stopped at the export specie point, and gold is exported. So long as there is gold to be exported the disparity of exports and imports can continue. If the export proceeds till the country's stock of gold is exhausted, the gold standard can no longer be maintained, and then either credit must be contracted or the proportional adjustment of the exchanges must at last pass beyond the specie point.

These three examples, a failure of the harvest, a foreign loan, an expansion of credit, show the variety of influences to which the foreign exchange market is susceptible. But with all this variety there is a fundamental uniformity. In each case the due proportion between the consumers' outlay and the country's proper share in the world's wealth is disturbed, and the value of the consumers' outlay in wealth at world prices has to be corrected.

Credits in any country are sought after because they are the means of purchasing its products. The rate of exchange

between any two countries substantially expresses the relative purchasing power or the relative value in terms of commodities of their respective monetary units of account. If all goods could be freely transported from one place to another without cost, this would be exactly true. But in the actual circumstances of the world any commodity may have different values in different places, the difference between two places being any amount not exceeding the cost of transporting it from one to the other. For some commodities the cost of transportation is prohibitive; for *services* there is often no question of transportation at all. As between two places in which all commodities have not the same relative values there is in strictness no such thing as the "relative value" of their respective monetary units. To compare the values of the monetary units in shoes or in ships, in sealing-wax or in cabbages, would be intelligible, but each of these comparisons might give a different result. Or a composite commodity might be made up of appropriate quantities of a number of different commodities. This composite commodity would have a determinate value in terms of each of the two monetary units to be compared, and would thus express their relative purchasing power so far as the selected commodities are concerned. The price of a composite commodity of this kind provides what is called an "index number" of prices. If a schedule of commodities be chosen which includes all the most representative articles of general consumption, the index number comes near to measuring something that can be called the value or purchasing power of the monetary unit. But this is still only a manner of speaking; the value remains relative to the commodities; only the comprehensiveness of the selection gives the comparison greater generality. And however comprehensive the selection the generality can never be complete. The same schedule of commodities would not usually be appropriate to two different places. For example, each might consume a specially large proportion of its own products, which would be cheap, and a specially small proportion of the products of the other, which would be dear. If a schedule appropriate to one were chosen, and special

prominence given to the products which were cheap and plentiful there, its monetary unit would be credited with a much higher relative purchasing power than with a schedule appropriate to the other.

We can, it is true, escape from all reference to a schedule of commodities if we content ourselves with saying that any cause which affects the value of one of the monetary units in terms of all commodities alike affects its value in terms of foreign currencies in the same degree. But this would be a law of very limited application, for in practice hardly any such cause can be instanced which might not affect the relative values of commodities *inter se*.

And as a matter of fact there is a schedule of commodities the prices of which in the two monetary units very nearly determine their relative values for the purposes of the foreign exchanges. This is the set of commodities which are imported or exported, or, if not actually imported or exported, compete in the import and export markets. These may be conveniently termed the foreign trade commodities. A part of the consumers' income in each country will be derived from the production of goods and services which compete neither with exports nor with imports, and a corresponding part of the consumers' outlay will be applied to the purchase of these goods and services. This part of the consumers' outlay does not affect the foreign exchanges. But the remainder of the consumers' outlay in each country is applied to the foreign trade commodities, and the share which each country gets of these commodities depends on the purchasing power of this portion of the consumers' outlay in terms of those commodities. A credit expansion in one of the countries, involving an increase in the consumers' outlay, will raise prices, but the prices of different commodities may rise in very unequal degrees. If the portion of the consumers' outlay applied to foreign trade commodities increases by say 5 per cent., then the prices of those commodities will rise on an average by 5 per cent., and to maintain equilibrium an adverse movement of the foreign exchanges must occur in the same proportion. But meanwhile the other commodities may have

risen 10 per cent. or 50 per cent. or not at all; price changes among them do not affect the exchanges, except of course in the sense that, with a *given* consumers' outlay, the greater the portion used up on them, the less the balance left for the foreign trade commodities.

But though the rate of exchange expresses the ratio between the values of the two monetary units relatively to the foreign trade commodities, this ratio may be very far from measuring their values relatively to such a set of commodities as might be taken to represent the cost of living generally.

A country may, for example, be very rich in certain natural products, so that its available capital and labour are almost exclusively devoted to acquiring and exporting them. Nearly all the commodities which can be conveniently imported will be obtained from abroad in exchange for these products. The productiveness of the country will be reflected in the high rate of wages, high enough to make unremunerative the production of any commodities which can be imported at a moderate cost. But there will be a residue of commodities, services, etc., which cannot be imported and can only be produced at home at a high cost in consequence of the high rate of wages prevailing, such, for example, as some building materials which are too bulky in proportion to their value to bear a long transit. Retailers' profits, and some items in the household budget, such as house rent and servants' wages, will follow the same rule. In such a case the foreign exchanges, measuring the purchasing power of the monetary unit with reference to the goods imported and exported, will give an altogether misleading view of what is ordinarily meant by its purchasing power.

For the purpose of comparing the purchasing power of two monetary units, the value of each of the foreign trade commodities must be taken in the country from which it is exported. It is there that the choice is made in which market the goods are to be sold; it is there that the comparison is made between their value at home and their value abroad. The value abroad in this comparison is the value f.o.b.—that is to say, the value exclusive of freight, insurance

and customs duties. Freight must be regarded as a separate commodity, for either country may provide shipping for some of the other's products as well as for its own. The services of shipping so provided are as much exports as the same value in goods. If one of the countries has a high protective tariff, the exclusion of that part of the price of goods exported to it which represents the customs duties may result in a wide divergence in the purchasing power of sums which, according to the exchange market, are equivalent.

It might perhaps be supposed that this equality of purchasing power in terms of foreign trade commodities only holds good when there is no net balance of other payments. For if there is such a balance or if there is a gold movement one way or the other, one of the countries must be made a more attractive market than the other, so as to secure an excess of imports. But this does not mean that there is any inequality of prices. Any such inequality would soon be removed under the influence of competition. The market for imports is made more attractive not by an actual rise of price but by a greater volume of purchases. If the consumers' outlay in the importing country did not expand, there would be an actual *fall* in the prices of foreign trade commodities there, since a given sum of its currency would, with a favourable exchange, command a greater quantity of those commodities at the prices of the world markets.

The transactions of international trade are wholesale transactions, and the prices are wholesale prices. Consequently the action of the consumers' outlay on markets is not direct. The merchant indeed regulates his purchases according to the demand which he finds. But of course he has also to take account of the state of the money market and the state of his stock-in-trade. This aspect of the foreign exchanges we must leave to be developed in the ensuing chapters.

Payments do not affect the exchanges till they are actually made. The individual who makes the payment must have the means of payment ready to hand. If he does not already possess a sufficient credit he must borrow. If he neither possesses nor can raise the funds, the payment cannot be

made, and the foreign exchanges are no more affected than if it were not due. When credit is inflated, people are enabled to make more payments than the economic position really justifies. If the exchanges remained unaffected they would be gaining real wealth in exchange for fictitious money. The actual effect upon the exchanges arises from the endeavours of those who are paid in this fictitious money to convert it into wealth, either by drawing out gold for their credits or by selling them in the foreign exchange market. The supply of gold in the hands of the banks and the supply of foreign credits in the hands of the exchange dealers are both depleted; the banks respond by contracting credit, and the exchange dealers by an adverse adjustment of the rates of exchange.

CHAPTER V.

SYSTEMS OF NOTE ISSUE.

NOW that we have dealt with the principles of the foreign exchanges, we can return to the consideration of the control of credit and currency at the point at which we left it.

The great practical currency questions of the present day are neither those of a simple gold system, nor those of an unsupported paper money. In 1914, before the war broke out, all the principal nations of the world (except China) employed gold as their standard of value. To a greater or less extent they used legal tender paper money as the actual medium of exchange, but in theory at any rate the paper was either convertible into gold or maintained at a fixed gold value. In some countries the position was complicated by the existence of silver coins of unlimited legal tender, which were kept at a fixed gold value, above the market value of the silver they contained.

In the present chapter we shall have to examine the different relations that may be established by law or practice between the supply of gold on the one hand and the quantity of paper money issued on the other. Since the bankers regulate credit according to their supply of legal tender money, it will be these relations that ultimately determine the effect of a gold movement in expanding or contracting credit. It must be remembered that the bulk of the demand for legal tender money is for the payment of wages. Money, whether gold, silver, or paper, which is in too large denominations for this purpose, will not satisfy the demand. In the Middle Ages when a foreman got 4d. a day, a skilled mason 3d., and a labourer 1½d. or 1d., the only English coin was for a long time the silver penny, which was about the size of our present threepenny-piece. In the fourteenth century a certain

amount of gold was coined for the convenience of merchants, but silver was inevitably the standard, and even in silver the standard coin was very small. In India at the present day gold and paper are convenient to the merchant and the rich man, but even though the standard of value is gold the smallest gold coin is too big for the payment of wages, and the bulk of the circulation consists of silver rupees. In England, before the war, the smallest denomination of legal tender paper money was the £5 Bank of England note, and wages were paid in gold and subsidiary silver. In France, before the war, the smallest notes were for 50 francs. These being the equivalent of about £2 were more adapted to retail transactions and to wage payments than the English five-pound notes, but none the less a considerable circulation of 10- and 20-franc gold pieces was required, for silver 5-franc pieces, though unlimited legal tender, are too bulky to be convenient for large payments. The United States on the other hand has always been a paper-using country, notes down to one dollar being in ordinary use. Thus the difference between the country with a simple gold currency and that with a paper currency convertible into gold is one of degree rather than one of kind.

Gold may be needed for any or all of three distinct purposes. It may be needed for circulation as coin, or to form a reserve against the circulation of paper, or for export to a foreign country. The two former sources of demand depend upon the law governing the currency. If the law allows no paper money below a certain denomination, and if that denomination is too high for some considerable class of payments above those for which subsidiary silver is suitable, then gold coin will circulate, and a demand for legal tender money will materialise, in part at any rate, as a demand for gold coin. In so far as the demand can be met by the issue of paper money, an addition to the supply of gold may still be necessary if, as is usually the case, the law prescribes a relation between the amount of paper money issued and the amount of gold held in reserve against it. But it is important always to bear in mind that these requirements are imposed by law and can be altered

by law. If no notes are allowed below £5 or 50 francs, the legislature can alter this at any moment and authorise the issue of notes down to 10s. or 5 francs. If the note issue is limited by some relation to the gold reserve, the legislature can suspend the limit. In the last resort it is only the demand for export which cannot be regulated by a change in the law. The demand for export arises when the exchange on a foreign country reaches the export specie point. Thereupon it becomes profitable for anyone who possesses or can obtain any considerable sum in gold to send it to the foreign country, and in practice bullion dealers and exchange dealers will take advantage of this, *provided* that the market price of gold does not exceed its coinage price. The coinage price of gold is the value in money of the coin into which a given amount of gold can be transformed. For example, in France a kilogramme of gold, nine-tenths fine, is coined into 3100 francs, so that the coinage price is 3100 francs the kilogramme. This equation determines the value of the money of account in gold; so long as it is exactly maintained the gold standard is preserved; whenever the market price of gold deviates in any degree from the coinage price, the gold standard is to that extent departed from. So long as the paper money is genuinely convertible on demand into gold, and bank credits into paper money, the market price of gold is effectively kept down to the coinage price, for there is always a seller at that price. If credits cannot be thus transmuted into gold on demand, then the price of gold may at any time rise above the coinage price. The management of a currency based on a gold standard under modern conditions has two principal branches—first, the accumulation and maintenance of a sufficient gold reserve to secure the invariable convertibility of bank credits and paper money into gold; and, secondly, the regulation of the value of the monetary unit, by inducing an expansion or contraction of credit as the circumstances may require. The second is the more fundamental. The export of gold is a sign that the value of the monetary unit has fallen below the point at which equilibrium is maintained in the foreign exchanges, whether this fall be due to an excessive

expansion of credit, or to some other cause, such as a shortage of exportable commodities. The remedy for the depreciation of the monetary unit is a contraction of credit. If this remedy is not applied, gold may go on being exported, and yet the exchanges may remain adverse, for, so long as the quantity of purchasing power in circulation is excessive, the value of the monetary unit, as determined by the quantity theory, will be depressed. In such a case no gold reserve will be great enough to secure convertibility. On the other hand, if credit is adequately controlled the drain of gold can be stopped, and it is only necessary to have such a stock of gold available in the country as will just meet the maximum possible demand for export in the interval between the first commencement of the drain and the time when the steps taken for the contraction of credit become effective. To this aspect of the question we shall return later. Here we shall consider the different systems that have been devised for accumulating and regulating gold reserves.

We saw at the end of Chapter III. that in order to regulate a paper currency it is desirable to entrust the issue of the legal tender notes to a central bank more or less closely associated with the Government, or even subordinated to it. There are, however, some systems of note issue which do not require any regulation at all, being absolutely automatic in their operation. In the United States the public prefer paper to gold. The gold available for circulation does not pass from hand to hand, but is deposited with the Treasury in exchange for "gold certificates". The Treasury is not called upon to exercise any discretion in the matter; it receives and keeps the gold, and the gold certificates in circulation are exactly equal to the gold kept. So long as what is needed is money for internal payments the certificates pass from hand to hand and remain outstanding. As soon as gold is needed for export the certificates are presented and the gold withdrawn. But however many certificates are presented the gold of course is always forthcoming. It might be supposed that this system of gold certificates is indistinguishable from that of a gold coin circulation, except merely for the

greater or less convenience of handling paper instead of coin. But there is just this difference that in an emergency the notes may *cease* to be mere gold certificates; some of the gold by which they are secured may be diverted to other purposes, or new notes may be put into circulation without their equivalent in gold being added to the reserve. This may not be in accordance with the law, but the law may be amended, or, in extreme emergency, broken. Such a measure may be denounced as a breach of faith, and whether it is so or not can only be determined by reference to the understanding on which the gold was originally deposited. But even if it is a breach of faith, it is arguable that the other party to the contract has suffered no detriment so long as gold is forthcoming when he asks for it. If the emergency is really extreme, if for example, such a shortage of legal tender money has occurred as we found in Chapter II. to threaten a universal suspension of the banks, a Government may be right deliberately to break its understanding with the certificate holders; it may save the whole financial fabric of society at the cost of a "farthing damages" to them.

Of course a gold coin circulation may be supplemented in time of crisis with a new issue of notes, provided that the notes can be prepared and printed in time and that people can be induced to accept them. A gold coin circulation provides an indirect gold reserve which can be drawn on as fast as paper can be issued to take its place. But the displacement of gold by paper may take a considerable time. The banks may agree to pay out nothing but paper and to place all the gold which they receive in the course of business in a central reserve in exchange for the paper they draw out. But they probably cannot be compelled to do this, if they think it is better business to keep the gold in the hope of its earning a premium later on, and even if they agree, much of the gold coin in the country may not pass through their hands. The man who is too poor to have a banking account, and keeps his cash balance in the house, will probably leave the same little accumulation of gold coins almost untouched week after week, month after month, perhaps even year after year.

It is only when the emergency arises for which the reserve provides that he actually draws it out. If he finds that his employer begins one day to pay his wages in paper instead of gold, he will spend the paper money as he receives it, but his little hoard of gold will still remain untouched. Under a gold certificate system this problem of displacing gold from circulation does not arise. The cash actually in people's hands is already in the form of paper; the gold is already assembled in one central stock. Nothing is needed but the suspension of the law to make the gold available as well as the paper.

Another system of paper money which requires no discretion in its management is that of an absolutely fixed issue, *provided* that the amount fixed is distinctly less than the minimum amount of legal tender currency ever needed for internal circulation. This proviso is very important, for if the fixed note issue is ever in excess of the amount of legal tender currency needed, the limit becomes inoperative, and the currency requires as much management as if there were no limit at all. The demand of a community for currency cannot be absolutely fixed, and if the fixed issue is below the minimum demand the paper must always be supplemented by some other form of money, the amount of which will vary according to the need for it. So long as gold and paper circulate side by side subject to a legal tender law the paper will pass at its nominal value. The supply of paper being *ex hypothesi* insufficient to meet the whole demand for currency, debtors will be compelled sometimes to pay in gold; when they do so they have no legal right to pay less than they would pay in paper; consequently gold and paper must circulate at par.

In time of crisis the fixed issue system has both advantages and disadvantages. On the one hand, people are already used to paper money, and the means of producing it are already in operation. If the fixed issue is to be exceeded, it can be done with smoothness and celerity. On the other hand, the actual stock of gold in the country is less than it would be under either the gold certificate system or that of

a gold coin circulation. But of course provided the gold stock is sufficient to meet the demands of a crisis, any further supply of gold is sheer waste. It would be universally recognised as safe for a country to have *some* uncovered paper-money in circulation, and that being once admitted the fixed issue system may be classed as a very cautious and conservative form of currency law. In practice the fixed issue system is usually united with the gold certificate system. Notes are issued to an amount equal to the gold reserve held, and to a fixed amount in addition. No distinction need be made between the notes which are covered by gold and those which are not; that is to say, none of the notes are expressly issued as gold certificates. Consequently in the event of the law being broken or suspended there is no room for the accusation of a breach of faith.

This system originated in the famous Bank Charter Act of 1844, which regulated the note issue of the Bank of England, and has since been widely copied with or without modifications. Before that Act the note issue of the bank was in the absolute discretion of the Directors, without even a purely nominal maximum limit such as that to which the note issue of the Bank of France is subject. The Act of 1844 divided the bank into two Departments—the Issue Department, which had the sole responsibility for issuing and paying notes; and the Banking Department, which retained the business of discounting and lending, and creating and transferring bank credits. The Issue Department holds a fixed amount of securities, equal to the fixed fiduciary issue (at present £18,450,000), and as this fixed issue is far below the lowest amount of notes ever in circulation, the business of the Department consists merely in paying out notes for gold and gold for notes. The whole business of regulating credit, which belonged to the undivided Bank of England as the central bank of issue before 1844, now attaches to the Banking Department.

In fact, experience has shown that even with an automatically regulated paper currency, which does not need to be managed on banking principles, a central bank for the control of credit is almost indispensable. For a long time the United

States was an example, or rather a warning, of the contrary system. But even there the Associated Banks of the New York Clearing House had already created an organisation which discharged some of the functions of a central bank, before the Federal Reserve Act of 1913 established the system. For although that Act established not a single central bank but a number of "Federal Reserve Banks," each is alone in its own district and all are subject to some central control.

The effect of the introduction of the rigid limitation of the Bank of England note issue embodied in the Bank Act of 1844 was to leave available as the cash reserve of the Banking Department so much of the gold reserve as was not required to support the notes in circulation in the hands of the public. For accounting purposes it is the practice to leave this gold (except so much as is needed from day to day to use at the Bank's counters) in the vaults of the Issue Department, and to issue an equivalent amount of notes from the Issue Department to the Banking Department. Thus the reserve of the Banking Department is principally composed of that portion of the Bank's power of issue which is not for the time being exercised. If the Bank has £50,000,000 of gold, that entitles it to issue £68,450,000 of notes. If it has in fact issued only £30,000,000 to the public, there remains a sum of £38,450,000 in the reserve of the Banking Department. Thus the reserve is a purely legal concept; it may be either greater or less than the amount of gold held; its exhaustion is the signal not for the suspension of the Bank but for the temporary removal of the legal limit of note issue. The whole system depends upon this legal limit being respected. The Bank has to conduct its affairs in such a manner that it can always pay its depositors whatever sums they may demand, either in notes and gold for internal circulation, or in gold for export, without breaking the law. It must therefore take steps to restrict credit whenever its reserve shows signs of depletion. In the last resort it may be necessary to break or suspend the law. Four times in fact the Bank has had to approach the Government of the day to ask for legislation for this purpose. On three occasions—

that is to say, in the three crises of 1847, 1857, 1866—the Government took the responsibility of authorising the breach of the law, and promised to obtain the covering authority of Parliament, if necessary, in the form of retrospective legislation. On the fourth, the crisis that was precipitated by the imminence of war in July, 1914, an Act was passed empowering the Bank to exceed the limit with the permission of the Chancellor of the Exchequer. In only one case, that of the crisis of 1857, was it found necessary actually to exceed the limit, at any rate so far as the published accounts of the Bank show. The necessity of appealing to the legislature is a very real safeguard. The Bank Directors would not like to face either the Chancellor of the Exchequer, or Parliament with a request for extraordinary legislation unless they could show that they had taken every measure which prudence might dictate to avoid such a step. If they lightly took the consent of the legislature for granted, if they treated the suspension of the statutory limit of note issue as anything but a last resort, public opinion would condemn them, and the unique position which the Bank has gained for itself might be threatened. Thus we are led to the paradox which has been generally recognised as the real defence of the Act of 1844. The benefits of that Act are only felt when it is broken or suspended. This paradox is really only one application of the truism, that gold reserves exist to be *used*. It is futile to establish a rule to secure the accumulation of a gold reserve in support of the legal tender note issue, unless, when urgent need arises, the gold can in the last resort be released. It is true that the intention of Peel and of those who assisted him in framing the Act of 1844 was rather to prevent the use of an unlimited note issue to stimulate a credit expansion, but Peel himself admitted after the crisis of 1847 that its real merit was to be found in the accumulation and preservation of a large stock of gold which could be made available by a suspension of the Act.

And wherever an automatic system of note issue is established, such as that with a fixed fiduciary issue, the unexercised legal power of issue provides the normal reserve

of the central bank, while the gold reserve held against the notes actually issued provides a second line reserve, only to be used as a last resort.

The separation of the banking business proper of the central bank—that is to say, that of discounting, lending and creating and transferring credits—from that of note issue, makes the part played by it slightly different from that described at the end of Chapter III. In England the reserves of the other banks are held in the form not so much of bank notes as of credits at the Bank of England. A certain amount of coin and notes they require for their daily dealings with their customers, but any reserve beyond that they leave on current account at the Bank. Thus all the legal tender money in their hands may be regarded as *in use*; they cannot spare any, and if some were withdrawn from them they would have to replace it by drawing an equal amount out from the Bank of England. An absorption of cash for internal circulation is thus promptly felt by the Bank of England, and the Bank of England also has to find whatever gold is needed for export. As the holder of the only surplus stock of gold in the country the Bank of England has the same power of governing the rate of interest as a central bank in control of an elastic note issue. As the central bank of issue provides legal tender money to form the reserves of the other banks, so the Bank of England provides credits to form these reserves. In either case the rate of interest asked must ultimately determine the rate prevailing in the money market.

The great continental banks of issue differ from the Bank of England in that they manage their note issues on banking principles. Even where the principle of the Act of 1844 has ostensibly been imitated, with apparently slight modifications, in practice the note issue is not rigid but almost completely elastic. When in 1873 the old Bank of Prussia was wound up and merged in the new German Reichsbank, a symbol of the newly-won unity of Germany, the principle of a fixed fiduciary note issue, supplemented with an unlimited issue against cash, was adopted. But to avoid the illogical English plan of a law which is only useful when it is broken, the Bank

was to be allowed to exceed the limit subject to the payment of a tax at the rate of 5 per cent. per annum on the excess. The tax was intended to mark out the exceeding of the limit as something exceptional, and for the first twenty years of the Bank's existence the limit was indeed very rarely exceeded. But in spite of successive increases of the fixed limit itself, the occasions on which it is exceeded have become more and more frequent and, before the outbreak of war, had ceased altogether to be exceptional. Especially at the end of each quarter, when there is a general settlement of accounts, which requires the temporary circulation of a larger amount of currency than at other times, there was almost invariably an excess on the limit, notwithstanding that in order to meet the special conditions an amendment of the law has fixed a higher limit at and near those dates. If the unexercised right of issue beyond the fixed limit is to be regarded as the reserve of the Reichsbank, then this reserve is as often a negative as a positive quantity. In practice the Reichsbank issues notes in the discount of bills or in advances to traders with almost as free a discretion as the Bank of France, which is subject to no legal restriction on the amount of its note issue, except a maximum limit which is regularly raised by fresh legislation as soon as it is approached.

In avoiding the anomaly of the English suspensions of the Bank Act, the Germans have lost the special advantages of the system embodied in that Act, in that the transgression of the limit has ceased to be exceptional. But it would probably have been vain in any case to try to acclimatise the English system in Germany. It is not adapted to a country where payments are made and consequently balances held to so great an extent in legal tender paper as compared with bank credits. This predominance of legal tender paper is less marked in Germany than elsewhere on the Continent, but nevertheless it is considerable enough to make the control of legal tender paper on a banking system an almost necessary element in the control of credit. The elasticity which in England and America is so essential to bank credits, is almost equally essential, on the continent of Europe, to paper money. A

currency system which limits the quality of elasticity to the bank credits and leaves the paper money rigidly confined in the regulations of an Issue Department would not work under continental conditions. The demands which in England are easily met by an extension of "other deposits,"¹ would require an extension of the "active circulation" or notes in the hands of the public. The continental banks of issue, when they rediscount bills for other banks, are often practically advancing money not to the banks but to the traders who originally drew the bills, the bankers intervening as guarantors of their customers' credit. It is because they finance trade in this way, as well as supply legal tender reserves to support the other banks' credit operations, that the banks of issue have such large balance sheets as compared with the Bank of England, regard being had to the scale of the financial operations of which they are the centres. Consequently, the ebb and flow of the note issue of one of these banks is great even in comparison with the ebb and flow of the deposits at the Bank of England. A system which rigidly limited this ebb and flow could not work.

Another plan for regulating paper money, though one not so prevalent as the various modifications and adaptations of the English system, is that which requires a fixed proportion of the note issue to be covered by gold. Under the fixed issue system any receipt or withdrawal of gold makes an exactly equal increase or decrease in the possible note issue. Apart, therefore, from the occasions when, with or without legal authority, the limit of uncovered notes is exceeded, the note issue behaves just like a currency of gold certificates or gold coin. With a fixed proportion the case is different. If the note issue is limited to, say, three times the gold reserve, the receipt or withdrawal of gold increases or decreases the possible note issue by three times as much. If the foreign exchanges are favourable the needful expansion of the note issue can be effected with one-third of the amount of additional gold that would be necessary on the fixed issue principle. But, when the foreign exchanges are unfavourable there will be a

¹ I.e., deposits other than those of the Government.

demand for gold for export ; every note presented for payment will diminish the reserve not by one-third but by the whole of its value. The proportion of reserve to liabilities being thus continually diminished, it may be necessary either to break the law as to the proportion, or to make the notes inconvertible. But whereas under the *fixed issue* system the breakdown only occurs when there is a too insistent demand from the banks either for legal tender currency for internal circulation or for gold for export, under the *fixed proportion* system the break-down arises from the inherent vice of the system. In fact, there is no room for any contraction, however small, of a note issue regulated on the fixed proportion system, unless there is a reserve of gold *in addition* to that required by law.

But though it may be granted that an automatic regulation of a note issue on this principle is impossible, that does not dispose of the question whether the limitation of the note issue to a fixed proportion of the reserve may not be a wise system to pursue, supposing it is adopted merely as an administrative rule, not as a cast-iron statutory restriction. At first sight it is attractive. A fixed proportion agrees well with the practice of banks of deposit. The system is elastic, inasmuch as a small movement of gold makes possible a much larger movement of paper money. If the proportion is fairly high—say, not less than one-third—there can never be any serious doubt about the central bank having enough gold to cash any notes that may be presented (provided that it is ready to reduce the reserve temporarily below the proper proportion for this purpose and that it takes prompt steps to restore it when so reduced).

But none the less the fixed proportion plan does not compare favourably with the fixed issue plan. The elasticity which seems to be so advantageous is really a danger. Credit suffers in any event from the defect of being too elastic, and if the substratum of legal tender money is also made elastic this defect is aggravated. If treble the amount of legal tender money and therefore treble the amount of credit can be created with a given amount of gold, the danger of a given gold movement leading to a state of excessive inflation is increased. If

all the gold-using countries managed their currencies on this plan, the periodical expansions of credit which take place would be greater than they already are, and the financial crises in which they so often end would be correspondingly more severe.

The fixed proportion plan has been adopted in the United States for regulating the note issue of the new Federal Reserve Banks. The cash reserves held by these banks against their note issues are to be 40 per cent. of the amount of notes outstanding, and if the reserves fall below this proportion the banks have to pay a graduated tax on the deficiency. The tax is 1 per cent. so long as the proportion does not fall below $32\frac{1}{2}$ per cent., but after that point the tax is to be $1\frac{1}{2}$ per cent. or more on each $2\frac{1}{2}$ per cent. of the deficiency. This is an ingenious attempt to substitute an automatic rule for discretion, but it is to be observed that a very wide discretion is none the less reserved to the Federal Reserve Board in charging interest on the issues of the Federal Reserve Banks, as well as in controlling credit generally. The Federal Reserve Act is still too recent, and circumstances since it came into operation have been too exceptional, for experience to have thrown light on its practical working.

CHAPTER VI.

INTERNATIONAL CURRENCY MOVEMENTS.

AT the root of nearly all currency problems is to be found that inherent instability of credit which we analysed in Chapter I. In Chapter II. we showed that, if an excessive expansion of credit occurred in a country which depended on gold for its supply of money, the whole structure of credit might collapse from the exhaustion of all surplus supplies of legal tender. The grounds for this conclusion were two-fold. First, though the consumers' income is increased, the part composed of wages is not immediately increased in proportion and, even when wages do rise, the amount of cash continuing in circulation, the cash portion of the unspent margin, only grows gradually. There is thus a long interval between an increase in the quantity of credit and the corresponding increase in the circulation of money. Secondly, the increase in the consumers' outlay tends to deplete stocks of goods, orders are given for the replenishment of stocks, there supervenes an over-pressure upon the productive powers of the country and an accumulation of orders awaiting execution, and this accumulation of arrears of orders constitutes a latent demand for credit, which will only materialise when the arrears begin to be overtaken. The result is that when trade is stimulated in this way, the proportion of cash reserves to liabilities shown in the bankers' balance sheets becomes misleading. Apart from any fresh stimulation of trade, commitments already exist which are destined to produce a drain of cash and an insistent demand for new credit.

How is this danger affected by the foreign exchanges? At first sight it appears to be accentuated. The depletion of stocks and the rise of prices make the country a good market to sell in and a bad one to buy in. Imports are increased,

INTERNATIONAL CURRENCY MOVEMENTS 87

exports diminished, a balance becomes due to foreign traders, the exchanges become unfavourable, gold is withdrawn for export. Thus to the drain of gold for internal circulation is added a drain of gold for export. But far from increasing the danger of a banking collapse, this foreign demand for gold greatly facilitates the task of the bankers, for it gives them an earlier warning. We saw in Chapter III. that a stimulation of sales and a rise of prices are among the first results of a credit expansion. They are signs of an increase in the consumers' outlay, and this in turn is directly and immediately caused by the acceleration of the creation of credit. The acceleration may be considerable at the very outset of the credit expansion, and the attraction of imports and the curtailment of exports will begin at once. There is a rise in the aggregate demand for goods and services, as measured in the monetary unit, and this increased demand produces a general rise in the prices of goods and services, and in particular in the prices of foreign credits which give a command over foreign commodities. But when all the countries concerned have an effective gold standard, gold is the one commodity the price of which cannot vary. The general rise of prices of all other commodities diminishes the purchasing power of gold at home ; it is therefore sent abroad to countries to which the rise of prices has not extended and where its purchasing power is accordingly undiminished. The country which exports the gold finds its surplus reserves thereby reduced ; that which receives the gold finds its reserves increased. Both will turn round and look at the working of their currency arrangements. The one will be led to contract credit, for fear of its gold reserves being altogether denuded ; the other will be led to expand credit to avoid accumulating a plethora of idle and therefore useless gold. If this contraction and this expansion of credit did not occur, the disparity between the monetary units of the two countries would remain, and the flow of gold resulting from this disparity would persist unabated. The depletion of the reserves in one country and the increase of those in the other would continue progressively. In fact, the longer the adjustment of credit is postponed, the

more urgent it becomes. In practice early action is the rule. The banking community in any highly-developed country is afraid of a loss of gold, and any seriously unfavourable movement of the exchanges (unless it be explicable by some cause which is known to be temporary and limited in its operation) is the signal for a prompt contraction of credit. The contrary event of a gain of gold presents an opportunity for that expansion which is the natural tendency of credit in so far as it is not restrained by being harnessed to a metallic standard.

Any country which indulges in an expansion of credit in which its neighbours do not participate tends to lose gold, but this leads it to curb the expansion, and the gold which it exports forms the basis of an expansion in other countries. In the same way a country which is the scene of a credit contraction tends to gain gold, and the countries from which this gold comes have themselves to contract credit.

To suspend the payment of paper money in gold is to remove gold from the exceptional position which it holds as having a fixed price in terms of the money of account. There is no longer any reason why the price of gold should not rise along with the prices of other commodities, except perhaps that there may be gold coin in circulation which can be collected and exported, and which will still provide a source of supply at the coinage price for a time. Even when gold payments have been suspended, the price of gold may still not exceed the coinage price, provided that the supply of credit and paper money is so restricted that the value of the monetary unit, as determined by the quantity theory, does not fall. In other words the price of gold need not rise, if the prices of other commodities do not rise. But the *automatic* regulation of the value of the unit no longer works, and its value can only be maintained by a proper control of credit. It is by this control of credit that the gold movements themselves are regulated when credits are freely convertible into gold, and it is the universal aim in regulating currency to avoid the suspension of gold payments by means of a timely contraction of credit whenever a serious loss of gold is threatened.

INTERNATIONAL CURRENCY MOVEMENTS 89

It might be inferred that this regulation of credit so as to avoid the withdrawal of gold would be the solution of all difficulties; that the foreign exchanges would invariably give early warning of an undue tendency to credit expansion, and that the expansion could thereupon always be checked. But this solution of the problem is inadequate, because it leaves out of account the case of a *universal* expansion of credit, common to the entire gold-using world. However great the expansion of credit and the rise of prices may be in one country, there will be no loss of gold if there be an approximately equal expansion of credit and rise of prices everywhere else. The general employment of the gold standard, combined with the systematic regulation of credit, does not prevent expansions and contractions of credit, but merely secures that they shall be approximately equal and simultaneous everywhere. A movement of gold from one country to another is simply a sign that they are not exactly keeping pace. One lets credit expand a little faster than the others and loses gold; another lags behind and receives gold.

But if the whole gold-using world be regarded as a single economic unit, it suffers from just the same dangers as we have already traced in a single country. It is threatened by the inherent instability of credit, and when a credit expansion occurs, the dangerous latent demands for cash and credit come into being in a greater or less degree in every country which participates in the movement. When the latent demand for cash becomes actual, the turning point is reached. The banks become sensible of a growing drain of legal tender money into circulation, which is in reality the consequence of their too lavish creation of credit long before. They endeavour to contract credit, but are confronted with the apparently insatiable demands of manufacturers and merchants, who are committed by contracts already concluded to produce or buy goods, and who cannot fulfil their engagements unless they borrow. In coping with this situation no country can expect help from any other, since all are in difficulties.

Nevertheless different countries may be affected in widely different degrees. The credit expansion is spread abroad

through the channel of the foreign exchanges, and any cause which happens to affect the foreign exchanges in any particular country will affect its susceptibility to the movement. The principal causes of which account has to be taken are—first, changes in the production of foreign trade commodities, which alter the balance between exports and imports ; and, secondly, capital movements. Examples of both were given in Chapter IV. A failure of the harvest, or any similar falling-off of production, will tend to make the foreign exchanges unfavourable, and if credit conditions abroad were stable would occasion an export of gold and a contraction of credit. But as credit is expanding in foreign countries, these effects may be wholly or partly counteracted. The disparity of exports and imports that would otherwise be caused by the shortage of production is simply corrected by the increased demand in foreign markets, which import more and export less. On the other hand, a country which has an exceptionally good harvest, or is for any other reason producing more than usual, will tend to go ahead of the general expansive movement. It may either import gold, or may expand credit up to a higher relative level than its neighbours.

If these conditions of production are transitory, and come to an end before the process of expansion in other countries has ceased, the countries which experience them must thereupon take measures to get into step with their neighbours. That in which production has been short will expand credit when production is restored. That in which production has been bountiful must contract credit when production falls off again. But of course the world expansion of credit must sooner or later come to an end, and at that particular moment there are likely to be some countries which happen to be producing either more or less than usual. Their position will be very materially affected by this circumstance, but in the present chapter we shall not consider the conditions attending a world-wide contraction of credit.

There is one class of cases where production is itself affected by the existence of a credit expansion. When credit and money are plentiful, and prices rising, and the whole

• INTERNATIONAL CURRENCY MOVEMENTS 91

world feels itself prosperous, the effect on the demand for different kinds of commodities may be very unequal. The demand for luxuries is stimulated more than that for necessities, the demand for manufactured goods more than that for food. A country which specialises in the production of goods, the demand for which is stimulated more than the average, will be in the same position as if it were enabled to produce more, for, even apart from the probable increase of the output of these goods, the money value of a given output will be increased. This is true not only of manufacturing countries but of countries which produce the raw materials of manufacture. India, for example, was very greatly affected by the trade expansion of 1906 and 1907, largely on account of the exceptional demand for jute. The manufacturing activity of the world was accompanied by a great demand for sacks, etc., the raw material for which could not be indefinitely increased at a moment's notice. India as the great jute producer reaped the benefit, but paid the penalty when the crisis supervened, in a very severe strain upon her currency system.

But the most important class of production which ebbs and flows with the contractions and expansions of credit is the production of fixed capital.

This opens up the whole question of capital movements, to which up to now we have only given passing notice. We have shown indeed that investment is expenditure, and that the initiative in this expenditure rests not, as in the case of goods, with a merchant, but with the promoter who plans the use of the fixed capital or other product, which will be the outcome of the expenditure. The financing of capital expenditure is much more complex than the financing of trade. Traders may of course apply their own savings to extensions of their capital or may borrow by private arrangement from people who have capital to spare. But under modern conditions far the greater part of the investible savings of the people flow into the investment market, the Stock Exchange or Bourse as it is called. It is the business of the dealers in investments, who compose this market, to supply stocks and shares to the investing public, and just as the dealer in goods

always has on hand stocks of goods, so the dealer in investments has on hand stocks of investments. And the latter dealer like the former holds a part of these investments with borrowed money. The dealer in investments makes his profit partly out of a commission on the purchase and sale of securities for his client, partly by using his special knowledge of securities to buy them cheap and sell them dear on his own account.

The stock of securities which is being perpetually absorbed by the investors must be replenished. It is replenished by new issues, and it is in bringing out new issues that capital expenditure is really initiated. The promoter of capital expenditure sees the transaction from the point of view of the borrower. He may be himself a trader extending his business, or he may be floating a new company, or he may be acting on behalf of a Government or municipality. His motive is to be found in the existence of an opening for investment; he approaches the investment market with an offer of a future income in return for a present expenditure. This future income may be derived either from the profits of the venture or from the proceeds of taxes pledged by a borrowing Government. Now there is no necessary equality or even approach to equality between the demands of promoters and the quantity of money available for investment, and it is one of the most important functions of the investment market to equalise the two. The investment market receives money in return for securities from the investors, and pays money in return for new issues to the promoters. If the former transactions exceed the latter, its stock of securities is diminished and its indebtedness to the bankers is correspondingly lightened; in the contrary case, its stock of securities and its indebtedness are both increased. The market guards itself against the one contingency by raising and against the other by lowering the prices of securities. But quite apart from this it has a hold over the promoter in another way. The promoter, not being in direct contact with the investor, has to rely on an intermediary to get his capital subscribed. This intermediary, who is called an underwriter, undertakes to dis-

pose of the whole ; whatever portion of the issue is not applied for by the public he will himself accept and pay for, receiving a commission of so much per cent. on the whole issue for assuming this liability. If the supply of new issues outstrips the supply of savings, the result is that underwriters find that they cannot dispose of the securities for which they have made themselves responsible. Being loaded up with securities which are at any rate for the time being unsaleable, they are reluctant to do any more underwriting business, and this reluctance takes the form of charging more onerous terms. Promoters have to pay a higher commission, and to float their new issues at lower prices. When credit is expanding and trade is active, the trade of the investment market is more active than any other. The consumers' income being enlarged, the surplus available for investment is enlarged more than proportionately, and the receipts of the investment market are swollen. At the same time, trade being profitable, and producers everywhere endeavouring to increase their output, all the openings for new investment become more attractive than before. This is the promoter's opportunity. Just when he can use the investors' money there is plenty of it to be had. When credit contracts again, the supply of savings will fall off and the openings for investment will become less profitable. It may be objected that experience does not altogether confirm this, and that a time of trade activity is often found to be specially unfavourable to the underwriter's business. But (except when the expansion of credit has in reality already begun to give place to a contraction) the underwriter's difficulties are confined to the floating of securities bearing a *fixed* rate of interest. Both the borrowers and the underwriters are slow to realise that when trade is active they have to meet a very formidable competition from commercial and industrial shares, which set an altogether higher standard in the investors' expectations of yield. A Government or municipality, which has borrowed at $3\frac{1}{2}$ per cent. at a time of quiet trade, is surprised that the underwriters cannot even dispose of an issue of 4 per cents. at a time of active trade. The inference is hastily drawn that there is a scarcity of money, whereas the

fact is simply that profits are high and 4 per cent. has become unattractive. The real troubles of the investment market come when the time of active trade stops and profits become low again. The gilt-edged securities will then be relieved of the embarrassing competition from which they have suffered (though even they may not recover at once—see Chapter IX.) but whatever relief is given to the underwriters responsible for those issues will be as nothing to the new difficulties of those who have taken charge of speculative shares. As to what occurs at the transition from one state to the other, that will engage our attention in Chapter VIII. Here we are concerned with the effect of capital movements upon the relative progress of a credit expansion in different countries. For the present we will leave aside one of the most important classes of capital movements—that is to say, war borrowings—for war finance is a subject which demands separate treatment. So far as investment for the purpose of economic development (whether through Governments or through private enterprise) is concerned, most of the openings are to be found in what may be broadly called "new" countries, while the greater part of the supply of savings accrues in the "old" countries. Old countries go on steadily increasing their stock of capital to keep pace with the growth of their population, commerce, and industry, and to equip themselves with the latest appliances. But their demand for fixed capital is moderate compared with that of a half-developed country, which is still short of railways, harbours, roads, industrial machinery, buildings, etc., in comparison with its natural resources. Consequently there is an export of capital from the old countries to the new. This export of capital is very much stimulated when credit expands, and it shrinks again when credit contracts. But as we saw in Chapter IV., borrowing from abroad makes the exchanges favourable and lending makes them unfavourable. Consequently when credit is expanding and the new countries borrow more than usual, they find the exchanges favourable, and have the choice of importing gold or indulging in a greater expansion of credit than their neighbours. When credit contracts and they borrow less than usual, they lose gold and have to

INTERNATIONAL CURRENCY MOVEMENTS 95

effect a greater contraction of credit than their neighbours. And apart from this general tendency for foreign investment to rise and fall as credit expands and contracts, there may also be fortuitous movements of capital, due perhaps to the needs of Governments being met by large foreign loans or to new openings being suddenly discovered and attracting a rush of foreign capital to develop them. Thus it may happen that the foreign borrowings of a particular nation are at a maximum when those of others are at a minimum. These fortuitous borrowings are presumably transitory, and there is no reason why they should synchronise with credit movements.

Even purely domestic capital movements may have an influence on the degree of credit expansion that takes place in a particular country. Credit may be expanding more than abroad, and the consumers' outlay be correspondingly swollen, but if the surplus of the consumers' outlay is applied to additional investment at home, and not to the purchase of goods or investments abroad, there need be no adverse tendency in the exchanges. The exceptional volume of investment at home will no doubt to some extent divert capital and labour from the production of goods for export, and a shortage of exports would have the same effect as an excess of imports. But this need not appreciably affect the position, and indeed the diversion of purchasing power from the purchase of commodities to investment might be so great as to counteract it altogether. But, of course, one of the most important of all the factors which go to determine the degree of participation of any country in a world credit expansion will be its own credit policy. If it tries to hold aloof altogether, it will be deluged with gold. The prices in its domestic markets will be lower than in foreign markets, and its merchants will tend to sell abroad rather than at home. However rigid a hand may be kept upon the fabrication of credit, the gold itself will be an addition to the stock of purchasing power in circulation, and will produce some response to the movement of world prices. But it is clear that a country which follows this policy, will experience a much more moderate increase of prices than the others. This is not very different from the principle which

the Bank Charter Act of 1844 was intended to embody. The disastrous crises to which the country had been periodically subject, ever since banking had developed, were quite rightly traced to an excessive creation of credits, in the form of bank notes, which were then the prevalent form of banker's obligation. If the creation of credit had been as rigidly restricted by the Act as the issue of bank notes, the purpose of the Act might perhaps have been achieved. But this was not attempted, and probably if it had been would have been found impracticable. Experience quickly showed that the consequences of the instability of credit could not be avoided merely by rigidly circumscribing one form of credit money. The establishment of an automatic control of paper money simply transfers the responsibility for the regulation of credit to the banks which are free to create credits by means of discounts and advances. Nevertheless the amount of gold which a country must absorb in order to permit of a prescribed expansion of credit depends upon its currency system. As the expansion progresses, each country which participates in it will presently experience an increased demand for money for internal circulation. If the law permitted, the whole of this demand might be met by unsupported paper money, and the whole of the stock of gold would still continue available for export if required. But the law may prescribe a relation between the paper money and the gold reserve held against it, and it may prohibit the issue of notes below a specified denomination, so that some of the demand must be met by the issue of actual gold coin. All the gold needed to provide directly or indirectly for these additional supplies of legal tender money will be subtracted from the stock available for export. The diminution of this stock will be or should be the signal for a contraction or a relative contraction of credit, in order to replenish it from abroad. Whatever the law governing the note issue, the free surplus of gold, beyond what the law requires, will play a prominent part in the regulation of credit, for the regulation of credit is based on the foreign exchanges, and it is this free surplus of gold which is available for export if the exchanges become unfavourable. A country which has an inelastic cur-

INTERNATIONAL CURRENCY MOVEMENTS 97

rency system (such as that of gold certificates with or without a fixed fiduciary issue), and which is also cautious in maintaining its free gold reserve undiminished, will tend to import gold from those of its neighbours whose paper money is more elastic or whose reserves are less cautiously managed. The importation of gold is a sign that credit is expanding faster in the exporting than in the importing country. The time is bound to come when the general expansion of credit must cease and a contrary movement set in. The places in which the expansion has been greatest will have to take the first step. They will be losing gold for export and at the same time will be experiencing a demand for money, whether gold or paper, for internal circulation. Now, so long as there are still large stocks of gold available somewhere, a contraction of credit in one or two countries which have run short need not lead to any general interruption of the expansive tendency. But when there is no gold to spare anywhere, the first contraction is the beginning of a universal movement.

CHAPTER VII.

THE MECHANISM OF FOREIGN EXCHANGE.

UP to this point we have assumed credits in one place to be exchanged for credits in another, without inquiring too closely into the means by which such exchanges can be effected. We saw indeed in Chapter IV. that a bank dealing in exchange between two places must have establishments in both. For, in order that a debt may be transferred from one place to another, there must be a debtor in each. If a customer of the bank with a credit in one place wants to receive instead a credit in the other, the simplest means of remittance is a message between the two offices of the bank. At the one office the customer's account is debited with the sum to be remitted, and the message instructs the other office to credit him with the corresponding sum. The bank's indebtedness to the customer remains on the whole as before, except that a part of this indebtedness is due in a different *place*, and in a different *currency*. The customer can then draw on the new credit he has received, and use it as the means of payment in the place where it is due.

This simple form of remittance, which a hundred years ago was an abstraction, has become common in the form of the telegraphic transfer.

Historically, however, remittances originated in a much more complicated machinery, the bill of exchange. The reason why it is complicated is that the bill of exchange is at the same time a means of remittance and a means of borrowing.

Bills of exchange, of course, are not used only for international transactions. They are also used, and very extensively in some countries, for financing purely domestic trade. A bank lends money to traders who are engaged in the production and sale of goods. If the borrower is an ordinary cus-

tomer of the bank, and the banker knows his affairs, the money may be lent to him by way of an advance or overdraft, for which he might perhaps furnish some sort of collateral security. But a loan, of this kind is subject to the disadvantage, from the banker's standpoint, that the creditor cannot easily assign his rights in it to some one else. Bankers like to hold as large a portion as possible of their assets in what is called "liquid" form ; their liabilities are nearly all liabilities to pay money on demand or at short notice, and if a considerable portion of such liabilities happen to be enforced simultaneously the bankers must realise a part of their assets in order to meet them. Advances to customers may be perfectly good assets, but they will not supply the banker with any ready money till they become due for repayment. And the bank may find a difficulty in borrowing unless it can deposit as security some assets which can be easily assigned away to the lender. A mere acknowledgment of indebtedness from the bank's debtor would meet this requirement. But many borrowers are traders in a small way, whose affairs and whose names are unknown except to their bankers and the few traders with whom they have dealings. The credit of a small grocer in a country town may be in itself unimpeachable ; he may be less likely to default on any of his debts than a financial house of world-wide reputation ; but still his name on a promissory note will carry no weight except with people who know enough of him and his affairs to believe that they can trust his solvency and his honesty. But if two different traders are concerned in a transaction for which it is desired to borrow, each knows something of the affairs of the other, and the credit of each will reinforce that of the other. If both make themselves responsible for the debt, the security for the debt becomes very much better, for not merely is the chance of both becoming insolvent less than the chance of only one becoming insolvent, but the mere fact of either having pledged his credit for the debt shows, if the transaction is genuine, that he at any rate believes in the solvency of the other.

If the purchaser of some goods wants to arrange for the

purchase money to be borrowed on the joint credit of himself and the vendor, he can invite the vendor to "draw a bill upon him" for the amount. The vendor then writes out a document ordering the purchaser, who has become his debtor for the value of the goods, to pay the money, at some specified future date, to the man who is to lend it, the date of payment being fixed of course according to the period for which it is desired to borrow. To give the document its full validity the person on whom it is drawn (in this case the purchaser of the goods) must signify his acceptance of the liability so imposed upon him; in the technical phraseology he must "accept" the bill, by writing his name on the face of it.¹ Otherwise there would be no evidence on the document itself that the purchaser had ever given the vendor authority to order him to pay at all. A bill is a negotiable instrument. The original lender of the money can assign his rights in it to another person by merely writing on it and signing a direction that the money be paid to this other person instead of to himself (i.e. "endorsing" it to him); and the new holder of the bill can then endorse it on to some one else, and so on. So long as the bill and the signatures on it are genuine, each holder becomes absolute owner of the rights represented by it; he is under no legal obligation to satisfy himself that he is receiving it from honest hands. But every holder who sells the bill by endorsing it to some one else is regarded as guaranteeing the payment of the money when it becomes due, and if the drawer and acceptor, and the other endorsers all fail to pay, he may be compelled to pay it himself. Thus every signature on a bill gives an additional guarantee of its payment, and when it has been several times endorsed the security for ultimate payment becomes very good.

In practice the purchaser of the goods usually would not invite the vendor to draw upon himself but upon his banker for his account. The banker's credit, which is probably better than that of any merchant, would then be brought in

¹ The acceptor is therefore the principal debtor, the person on whom the bill is drawn. He may also be called the drawee. Bills are sometimes called "acceptances".

to support the bill. When the bill is thus drawn not upon the purchaser himself but upon his banker, it may be drawn either by the vendor and made payable to the person (probably the vendor's banker) who is to lend the money, or by the purchaser and made payable to the vendor, who can then endorse it in favour of the lender. The essence of the transaction in that case is that the purchaser is given a credit by his banker which may be drawn on at the appropriate future date, and whether he draws on this credit himself or authorises the vendor to draw upon it is a mere detail. Of course when a bill is transferred by endorsement the new holder does not pay the old its full face value (which he can only receive at a future date) but only that value, less interest for the period still to elapse before the maturity of the bill. This interest is called discount, and the bill when sold subject to discount is said to be discounted.

When a bill is used for an international transaction, being drawn in one country to be accepted and paid in another, it usually has to be discounted in the first instance *before* it is accepted. The drawer sells it to his banker in his own country, who transmits it to the country of the drawee in order that it may be accepted. Knowing his customer's affairs, the banker may be willing to give him credit for the value of the bill at once without waiting for news of its acceptance. A bill represents a debt due from the drawee *personally*. Strictly speaking therefore the liability might follow him wherever he may be, and if at the maturity of the bill he happened to be hunting big game in Africa the holder of the bill ought to come after him to demand payment. In practice, however, a bill is drawn on a bank or house of business with an office in a definite place. If a bill is drawn on a house with several branches, it is drawn on the head office or on a specified branch; it is not a liability of all the branches indifferently. And even if the place at which payment of the bill may be claimed is not determined in this way, the bill may be expressly made payable at a particular place, may be "domiciled," as it is called. It is well to remember that every foreign exchange operation is in reality the exchange of a debt in one

place for a debt in another. Before a debt can be so exchanged the *place* in which it is to be paid must be determined. The monetary unit in which it is to be reckoned is settled by the place of payment, for debts will only be enforceable at that place in the currency legally recognised. So it comes about that the exchanges relate the monetary units of the places in which they are quoted. But the essential function of the exchanges is not to relate debts payable in different *currencies*, but to relate debts due in different *places*. And exchanges are quoted between different places in the same country, which use the same currency unit.

It is easy to see why the bill of exchange was so long the recognised form of remittance. When communication was slow and uncertain, the importer of goods did not know when they would arrive or when payment would be demanded ; the exporter would have to wait for at least the length of two voyages before he received payment or even news that his consignment had arrived safely. The importer, when he ordered the goods, authorised the exporter to draw a bill upon him. The exporter could send the bill with the goods to a correspondent in the importer's country where it could be used to pay any debts he might have there, or he could sell the bill to some one who required to make payments there. It is this selling of the bills that brought into existence a class of exchange dealers who made it their business to deal in bills. The importer could not know exactly when a consignment of goods would reach his country, and if a bill arrived with the goods, demanding immediate payment, he might be seriously embarrassed. It was more convenient not to make the bill payable immediately on presentation, but to allow an interval, and not merely a breathing-space—an interval of a month or three months or more—to allow of the goods being sold and sufficient money accumulated to meet the bill. Thus the remittance developed into a borrowing operation.

The advantages of remittance by bill are by no means a thing of the past. The bill retains its position especially as the instrument by which foreign trade is financed. International trade requires to be financed. The merchant who

buys in one country and sells in another, like other merchants, holds his stock in trade in part with borrowed funds. But the funds may be borrowed either in the country from which he buys or in the country to which he sells, or perhaps even in some third country.

If two countries trading together financed the whole of their mutual trade with bills of exchange, drawn by exporters on importers, the natural course would be for each to finance its own imports. The bills would be drawn upon and accepted in the importing country, and it would be much the simplest course for them to be discounted in the country in which they have been accepted and will ultimately be paid. In the interval between the drawing of the bill and its acceptance, while it is in transit to the importing country, the exporter's bank would have advanced the money, but as soon as the bill arrives, it is accepted and discounted and for a period (possibly of several months) which elapses before the maturity of the bill the money is provided by the banks of the importing country. Discounting is lending; the holder of a bill, for the time being, is a lender.

In actual practice different countries vary greatly in the extent to which they finance their foreign trade. One may finance practically the whole of its own foreign trade and some even of the trade between other countries in which it has otherwise no interest whatever. This is the position of England now, as it was of Holland in the seventeenth and eighteenth centuries and of Venice still earlier. Another may finance practically none even of its own foreign trade.

It must be remembered that creditors do not ordinarily draw bills directly on their debtors, but are paid with bills drawn on banks or other financial houses with whom the debtors have made the necessary arrangements. A trader who exports goods to a country whose credit institutions are but little developed may decline to be paid with a bill on any of the local banks, and the importer may find it desirable to arrange with a foreign bank of world-wide reputation for a credit on which a bill can be drawn. In the previous chapters we have not considered the *quality* of credit; we have, in fact, tacitly

assumed that banks are always solvent and bank credits always good. The justification for so considerable an omission is that the theory of credit cannot be adequately understood except by an analysis which distinguishes the effects which do from those which do not depend upon the quality of credit. In the finance of international trade the quality of credit is very important. Traders prefer bills drawn on institutions which are not merely of sound but of unquestionable credit. Bills on obscure bankers can only be discounted, if at all, on less favourable terms. Consequently, in a country financially weak, importers may pay, as exporters are paid, with bills upon a foreign centre. An importer who takes this course will receive payment for the goods, when sold, in his own country, while the bill will fall due in the foreign centre. As part of his arrangement with the foreign banker or financier who accepts the bill, he must undertake to remit the funds necessary to enable the latter to pay the bill when it matures. He will probably have to make this remittance through an exchange dealer, who will undertake to provide the requisite sum in the foreign centre in exchange for the equivalent at the market rate of exchange. The exporter, who receives the bill by way of payment, being a merchant, who wants to hold not bills but merchandise, will send it to the foreign centre to be accepted and discounted. It may very commonly happen that the foreign centre is in the exporter's own country; if it is not, it is sure to be one of the great financial centres of the world, for otherwise it would not have been selected in preference to both the exporter's and the importer's countries. In any case, therefore, it will be convenient for the exporter to receive a credit there. It follows that bills which are accepted at a financial centre tend to be also discounted there. Both credits, which form the banker's liabilities, and bills, which are his most suitable assets, tend to collect, therefore, at such a centre. And the consequent development of banking adds to the financial strength by which it must in any case have been distinguished.

Ordinary banks both accept bills and discount them. But there are also institutions which specialise in one of these

functions to the exclusion of the other. Discount houses and bill brokers discount bills, supplementing their own capital with deposits, or money borrowed at call for the purpose. Accepting houses authorise merchants to draw bills, on condition that the necessary funds are provided to meet the bills when due. Their liabilities are therefore the bills and their assets are the merchants' obligations to provide funds. The credit of the accepting house is attached to the bill to enable the merchant or his creditor to discount it on more favourable terms, and the merchant pays a commission as the price of what amounts to little more than a guarantee. It is not quite accurate, however, to say that the accepting house supplies only a *mere* guarantee. A claim cannot be made against the guarantor of a debt unless the debtor has failed to pay. But the acceptor is himself the debtor on the bill. The drawer and endorsers are legally in the position of guarantors. The acceptor must pay up on the spot when the bill is presented after maturity, whether the drawer provides the stipulated funds or not. It is a consequence, too, of the acceptor being the principal debtor that the bill is payable at the place where he carries on business. If he were a mere guarantor this would not necessarily be so.

Good credit has many uses, and a variety of financial operations tend to be concentrated in a great financial centre. Prominent among these is that of underwriting, especially underwriting issues brought out in one country to provide capital for another. This class of underwriting is naturally associated with the accepting business, for in substance the underwriter's obligation is to provide credits at a financial centre for the borrowers to draw upon.

The business of a financial centre depends very much on the exchange dealers who have establishments there, and who effect the actual remittances between it and other parts of the world. These exchange dealers are, of course, for the most part banks. They not only remit by buying and selling cheques and telegraphic transfers, but they buy and sell bills, and they grant credits in all the countries in which they do business. Their assets are largely composed of bills, and

these bills are sure to be predominantly drawn on the financial centre. Consequently the local distribution of their assets and that of their liabilities do not correspond. At the financial centre their assets exceed their liabilities. At other places their liabilities exceed their assets. If at any time a large portion of their liabilities at one of these latter places has to be met, owing, for example, to a sudden money stringency, it may be necessary to make a part of the central assets available to meet the outlying liabilities. Bills can be sold for credits at the financial centre, but the credits cannot be remitted without loss through the exchange market because it is the exchange market itself that is in difficulties. The credits must be turned into gold and the gold sent to the threatened spot. Thus one of the essential conditions of the business of a financial centre is the unrestricted transformation of credits into gold and the free export of the gold.

A financial centre is likely to be very cosmopolitan. The exchange banks which possess large holdings of bills drawn upon it may derive their capital from many countries. The essential characteristic is that even though the bills may be drawn by foreigners on foreigners, yet they are drawn on the centre and payable in its currency. As traders in the more circumscribed area of a single country pay one another in cheques which are passed through a single clearing-house, so international traders pay one another in bills which are drawn on a single financial centre. Thus London is often called the clearing-house of the world's trade.

CHAPTER VIII.

A CONTRACTION OF CREDIT.

IN currency systems like those which formed the subject of Chapters V. and VI., where the legal tender circulation includes paper money convertible into gold, the regulation of credit is based upon the gold reserve, the free margin of gold which can be drawn upon either for export or for internal circulation without violating the law. This gold reserve may be threatened either by an internal or by an external drain. An internal drain of gold into circulation is usually gradual, and can only be modified gradually through the regulation of credit. An external drain is subject to much more rapid changes, and is therefore more susceptible of management. The outward sign of the conditions that cause an export of gold is an unfavourable exchange, and the problem of managing the currency constantly presents itself as the problem of inducing a favourable tendency in the foreign exchanges.

The weapon for the defence of the gold reserve is a contraction of credit. By its means the consumers' outlay is diminished, and, the country becoming a less favourable market to sell in, foreign trade commodities tend to be repelled from it; that is to say, exports are stimulated and imports checked. But in using this weapon, the *rapidity* with which it can do its work is a matter of the first importance, and in the present chapter we shall examine the different conditions which affect the sensitiveness of a credit system to a contraction of credit. The contraction may be assumed to be effected primarily by a rise in the rate of interest on short term borrowings (including of course the rate of discount on bills), but to be reinforced by such methods as are open to bankers to discourage their customers from borrowing.

We have already shown that a high rate of interest acts in the first instance on the wholesale dealer or merchant, who restricts his orders to the manufacturer or producer. How long will this restriction of orders take to affect the consumers' income and the consumers' outlay? Clearly the answer must depend partly on the state of business at the time at which the contraction of credit begins. If there is an accumulation of unexecuted orders, containing the menace of a great latent demand for credit, the arrears of orders must be worked through before the increase in the rate of interest can have any appreciable effect. But even if there be no such accumulation of commitments, the contraction of credit can only work gradually; there will still be an interval before all outstanding orders are completed. If every manufacturer accepted a new order only just before completing the last, the different orders outstanding at any specified moment would be in all possible stages of manufacture, some being just about to be begun, some in the early, middle, or late stages, some just on the point of completion. When the rate of interest is raised, even if the merchants give smaller orders, the effect on the demand for loans from the bankers will not be completely felt till the existing orders have been worked through, and if there is an accumulation of arrears it may not be felt at all till these arrears are overtaken. The borrowings of the manufacturers depend upon the volume of work upon which they are engaged, and the borrowings of the merchants depend upon the goods of which they have to accept delivery. So long as the manufacturers' output is undiminished the creation of credit will continue unabated; it is only when the manufacturers, having completed the old contracts, have to curtail their output in proportion to the diminished orders given by the merchants, that the contraction of credit really begins to take effect.

The full diminution in the demand for loans will only be accomplished when the merchants are taking delivery of the diminished orders, and both their borrowings and those of the manufacturers are on the lower level. Thus even after the completion of all arrears of orders, an interval must still elapse,

equal approximately to the period required for the fulfilment of an order, before the contraction of credit is completely effective. The period required "for the fulfilment of an order" is vague enough; it depends not only on the size of the order and the nature of the manufacture, but also on the capacity of the manufacturer's plant. The time taken in the manufacture of a single article sets a lower limit, and for some trades, e.g. shipbuilding, this may be many months. The construction of fixed capital is in most cases a lengthy process, and large capital commitments are therefore specially apt to overstrain credit when the turning point from expansion to contraction arrives. These capital commitments may be financed either by advances to the contractors engaged upon them or through the instrumentality of underwriters. In either case the advances are really in anticipation of the savings by which the capital expenditure has ultimately to be paid for. So long as the expenditure is proceeding, the necessary credits must be forthcoming, even though financial conditions have become unfavourable and the underwriters would be glad to be quit of their obligations if they could.

A contraction of credit impels the merchant to reduce his indebtedness not only by restricting orders for new supplies, but by pressing on the sales of his existing stocks, and perhaps also by leaving in the business profits which might otherwise be distributed. Now so far as the home market is concerned the possibility of selling goods is limited to the amount of the consumers' outlay. When the consumers' income falls off, the consumers' outlay does not necessarily fall off to a precisely equal extent, because people may draw on balances. In so far as they do so, the credit situation is directly relieved; the bankers' balance sheets are cut down on both sides, for the credits disbursed by the consumers are extinguished as fast as the traders pay off their indebtedness. The application of profits to paying off indebtedness has a somewhat similar effect, except that it does not act through sales of commodities. It represents in fact a diminution in the consumers' outlay, in which of course any expenditure on commodities out of the profits would have been included. To

that extent those who deal in goods and securities must find their sales falling off, and the result is that the efforts of one trader to pay off his debts may merely increase the debts of his neighbours.

It might be supposed that a high rate of interest would have a great and immediate effect upon traders' balances. The more they have to pay for borrowing money the more they will lose by keeping money idle. But in practice a trader who habitually adjusts his balances by regulating the amount of his temporary borrowing cannot easily reduce them further. And as contracting credit means flagging markets and falling prices, the time is unfavourable for buying goods. Even while the rate of interest is high, the desire to reduce idle balances may be counteracted by the reluctance of traders to launch out into new purchases. And the rate of interest is not likely to remain high. So effective is the influence of falling prices in reducing profits and discouraging the accumulation of stocks that, once a contraction of credit is fairly started, the market rate of interest may, and usually does, become very low without arresting its progress. When that happens the loss on an idle balance is actually less than under normal conditions.

Thus traders' balances, like consumers' balances, will only diminish slowly. It would seem therefore as if all the effects of a contraction of credit could only work slowly.

But this is to assume that the merchants' opportunities of selling off their stocks are limited to the home market, in which the people who deal with one another are all financed by the same set of banks. The moment foreign trade enters into the problem, all is changed. The country which finds the exchanges turning against it and its gold reserve threatened, merely has to find purchasers who are financed by another set of banks, in order to gain a vent for its surplus goods and to acquire the means of extinguishing its redundant credit.

In this respect there is a wide difference between a country which is a great financial centre and one which is not. The traders of any country may be broadly divided into producers and dealers. The producers may be divided into those who

produce for export and those who produce for the home trade. The dealers may be divided into those who buy and sell at home, those who buy abroad and sell at home and those who buy at home and sell abroad, or, more shortly, home dealers, importers and exporters. The home dealers may be assumed to be financed at home. The importers and exporters may be financed either at home or abroad. A country which is a great financial centre will itself finance both its exporters and its importers. One which is not, may not finance either to any appreciable extent.

Consider the case of a country of the latter kind. Suppose that it contracts credit. The home dealers will respond by curtailing orders and pressing on sales. The producers for the home trade will be adversely affected; and will eventually have to restrict output. The export merchants will be unaffected by the credit contraction, and the producers for export will experience no diminution of orders. The import merchants will have no inducement to increase their sales. In short, as the effect of high interest rates on producers is small compared with the effect on dealers, and as a great part of the dealers in the markets of such a country are outside the influence of its credit system, the effectiveness of the credit contraction is diminished.

The restriction of orders affects in the first instance only the producers for the home trade. They will try to compete in the export and import markets, and in so far as they succeed they will communicate the pressure to the import and export dealers and will compete with the producers for export. But in so far as they succeed they will at the same time reduce the pressure on themselves. Thus the attachment of a portion of the mercantile community to a foreign banking system weakens the effect of the contraction of credit upon production.

The contraction of credit works not only by curtailing orders to the producers but by impelling merchants to increase their sales. The capacity of the home market being limited, the home dealers will tend to encroach on the export and import trades, either by selling to the export and import dealers, or by competing with the former in the foreign markets and

with the latter in the home market. Be the process direct or indirect, what happens is in effect that the home dealers get rid of their surplus stocks in exchange for foreign credits. This relieves the foreign exchange situation, and it is clear that the extent of the relief is proportional to the quantity of the surplus stocks. Other things being equal, the surplus stocks will be proportional to the business of the dealers concerned. Here again we see how the smallness of the mercantile element included in the country's credit system impairs the effectiveness of the credit contraction.

The case of the country which finances its own foreign trade presents a striking contrast. In such a country the producers have little or no direct contact with any merchants who are not subjected to the pressure of the credit contraction. At the same time the import dealers and export dealers, as well as the home dealers, are all interested in selling surplus stocks abroad. In proportion as there are more merchants, the surplus stocks and the foreign credits obtained in exchange for them are greater.

And the mechanism of credit reinforces the contrast. In the case of a country which is a great financial centre, both exports and imports will be paid for by bills drawn upon its own banks or accepting houses. So far as imports are concerned, the relation between the exchange market and the transactions to be financed is simple. When the goods are consigned, a bill is drawn upon a credit arranged by the importer in his country, and is discounted by the exporter in ~~his~~ country. The discounting of the bill, in a different currency from that in which it is ultimately payable, is an exchange operation, and directly affects the exchange market. A diminution of imports immediately relieves the demand for foreign currencies.

The case of exports is more complicated. The purchaser arranges a credit in the exporter's country, draws upon it and uses the bill to pay the exporter. The exporter discounts the bill in the *same* country in which it is ultimately payable, and no exchange operation takes place till the importer who drew the bill, has to remit to the acceptor the means of meeting it.

When the country on which both classes of bills are drawn contracts credit, and its exports are stimulated and its imports checked, there is a great outstanding mass of indebtedness due to it from the countries to which it has been exporting in the immediate past. Day by day, as the bills with which these exports have been financed fall due, sums have to be remitted to meet them from the countries to which the exports were sent. At the same time the export dealers, who have been financed in this manner, proceed under the influence of the high rate of discount to reduce their indebtedness by reducing their stocks. They abstain from buying, and consequently do not have to draw fresh bills; they hasten sales in foreign countries, and consequently acquire additional credits abroad. Meanwhile the import dealers, being equally subject to the pressure of the money market, likewise abstain from buying, and fewer bills are presented for discount abroad. All these tendencies combine to make the exchanges react at once to the contraction of credit.

A country, on the other hand, whose foreign trade is all or nearly all financed abroad has, as we saw, less power of stimulating exports and repelling imports by means of a credit contraction. And even such power as it has of doing this reacts less easily and immediately on the exchanges. The increase of exports indeed is immediately effective, being accompanied with a proportionate increase of bills on foreign centres requiring to be discounted in the exchange market before they are sent abroad. But the decrease of imports only decreases the bills which will mature in one, two, or three months; in the meanwhile it will do nothing to relieve the exchange market, which has to provide remittances to meet at maturity the bills drawn one, two, or three months before.

The greater susceptibility of the country which is a great financial centre to a contraction of credit is largely the result of the greater proportion of the short-term indebtedness due from merchants as compared with that due from manufacturers, manufacturers being less sensitive than merchants to the rate of interest. Both sides of the merchants' response are

important—the restriction of their purchases, and the increase of their sales. The increase of sales, by heaping up credits abroad, gives immediate relief to the exchanges, but this is not sufficient. If the pressure on credit were relaxed too soon, while the consumers' outlay is still excessive, the exchanges would at once relapse. The contraction of the consumers' outlay is proportioned to the restraint on production, and the restraint on production is governed by the restriction of the merchants' purchases. If the home dealers alone are subject to the contraction of credit, the restraint on production is only partial; if home dealers and export dealers are both subject to it, the restraint is complete.

This gradual diminution of the consumers' outlay is of the essence of currency control. If the consumers' outlay has become excessive this is due to a too profuse creation of credit; too profuse, that is, in proportion to the conditions and prospects of credit abroad. In the first instance a credit expansion stimulates production; it is when production ceases to respond easily to the stimulus that prices begin to rise. Inflation consists in the spread of the infection of high prices through production to the consumers' income and thus to the consumers' outlay. When the whole productive machine is working at a high level of money values, and markets have become unduly attractive to foreign trade commodities, imports increase, exports decrease, and a balance of indebtedness has to be paid. If matters are allowed to drift, the balance is paid in gold till the gold is exhausted. A contraction of credit, by impelling merchants to increase their sales and to diminish their purchases, helps to effect an immediate redress of the adverse balance of indebtedness and to preserve the stock of gold from further depletion. But a radical cure cannot be effected till the cause of the disorder has been removed, that is to say, till the high level of money values has been reduced.

The position in regard to securities is similar in principle to that in regard to merchandise. A rise in the rate of interest leads those who are holding securities with borrowed money to sell, and deters them from buying. A financially strong country is likely to carry on underwriting on a large

scale, as well as accepting, and therefore to have large holdings of international securities, which can be sold abroad in case of need.

The movements of merchandise and securities under the influence of a contraction of credit depend on the action of borrowers. There remains to consider the effect of a rise in the rate of interest on the *lenders*. Suppose for a moment that the rate of interest rises in a country which has not the same monetary standard as its neighbours, so that there are no specie points to limit the movements of the foreign exchanges. If the rate of discount on three months' bills were 1 per cent. higher there than elsewhere, the possessor of a credit in a foreign country would be tempted to remit thither in order to lend at this more advantageous rate. But as the profit on the transaction would be only 1 per cent. for three months, that is to say $\frac{1}{4}$ per cent., this tendency to remit could be counteracted by a movement of the foreign exchanges of no more than $\frac{1}{4}$ per cent. in favour of the country. The effect on lenders of a difference of 1 per cent. on short-term debts being so small, it is obvious that there might be a very large discrepancy between the rates in countries without a common standard. The direct effect on the exchanges through the attraction of remittances from lenders would be slight compared to the effects of a high rate of interest on those who borrow to hold goods and securities.

But where the rise in interest occurs in a country which is one of a gold-using group the case is more complicated. If the purpose is to check an inflation which is occasioning an export of gold the exchanges are at the export specie point. If the inducement to a lender to remit from a foreign country is to be extinguished, the exchange must react away from the export specie point, and apparently therefore, even though the additional rate of interest be the smallest that offers any profit worth considering, it cannot be counteracted unless there be a stream of remittances from abroad sufficient to stop the outflow of gold altogether. So long as the exchange remains at the export point the foreign lender gains the extra interest, and he cannot lose by exchange when the loan

matures and he wants to remit it back to his own country, because the exchange cannot go beyond the export point so long as the gold standard is effective.

In practice, however, there is room for a very considerable difference between the rates of interest in different markets, at any rate for a short time. A difference of, say, 1 per cent. for three months, or $\frac{1}{2}$ per cent. in all, may not be enough to remunerate the extra trouble, and cover the expenses of commission perhaps, involved in the double remittance. And the art of lending is largely the art of finding suitable borrowers. A financier cannot at short notice find eligible borrowers in a country which he does not know, and there may be obstacles to enforcing his rights in the courts of a foreign country, if this should be necessary, at any rate without excessive legal expenses. This speculative lending would probably be confined therefore to those financial houses, such as the exchange banks, which already have a footing in the country concerned as well as in their own country.

We are supposing that the rate of interest is raised to check inflation. If there is an inflation of credit at one of the places at which an exchange bank carries on business, there will be, in the first instance a pressure to remit *from* that place. Its cash holdings there, and its demand liabilities elsewhere will grow. The rates of exchange will be put up against the country of the inflation, and if when the export specie point is reached the remittances do not cease, the cash will begin to be sent direct in gold. If the rate of interest is then raised, the exchange bank is well situated to take advantage of it, by lending the superfluous cash, which would otherwise have to be sent abroad. But it is easy to see that this may not be a very alluring source of profit. The tide of remittances flowing one way modifies the balance sheet of the exchange bank by substituting assets in the country *from* which the remittances are made for assets in that *to* which they are made. So long as the new assets in the former are cash, and the cash is either gold or paper convertible into gold, the balance can be redressed by sending the gold from the one country to the other. But as soon as the bank lends the gold, a different kind of

asset is substituted for the gold, a loan localised in the country in which it is made.

Provided it is certain that the gold standard will still be effective when the loan falls due, there will be no harm in this substitution. But this is a very large proviso. It means that in order to attract lenders there must be confidence not only in the borrowers but in the currency in which the loans are repayable. If the inflation, for which the rise of interest is designed to be a remedy, gets out of hand and leads to a suspension of gold payments, the profit to the foreign lender by the extra interest will be wiped out by an ultimate loss on exchange. And this will particularly embarrass the exchange bank, which has increased the proportion of its assets held in the depreciated currency against demand liabilities in gold currencies elsewhere.

The two conditions that must be fulfilled if a high rate of interest is to attract loans from abroad are that the solvency of the borrowers and the stability of the currency must command the confidence of the foreign lenders. These are the very same conditions that make a great financial centre. Here therefore is yet another advantage which belongs to the financially strong country in the regulation of the foreign exchanges. When the rate of discount is raised, foreigners are immediately tempted to invest in its bills, in the assurance not only that they will be punctually met by the acceptors, but that the currency in which they are paid will be maintained at parity with gold. It is for this reason that a rise in the London bank rate is quickly accompanied by a rise in all other bank rates. Any money market which maintained too low a rate would quickly find the exchanges growing adverse owing to the desire of lenders to remit abroad. At other centres (I write, of course, of pre-war conditions) the foreign lender must always allow for the possibility of a loss on exchange through a depreciation of the currency in which his loan is repaid. As a result of the general prevalence of the gold standard, rates of interest in different centres are linked together. They are free, however, to vary within limits, "lending points" as it were, not unlike the specie points of

the foreign exchanges. If an extra 1 per cent. on a three months' bill is just enough to attract a French lender to the English market, then the English bank rate cannot be more than 1 per cent. above the French. Should the difference exceed this limit the remittances from Paris to London would speedily necessitate a rise in the French rate.

These limits, however, depending as they do on many speculative factors, are by no means so definite or so constant as the specie points in the foreign exchanges. A slight distrust of the currency may practically make the limits inoperative.

Even when the limits are fully operative, the difference between one rate and another is quite enough to enable one country to contract credit more severely than another, and this remains the only decisive remedy for inflation. High interest may make the exchanges favourable while it lasts, but as soon as it is reduced the loans begin to be withdrawn, and the effect is reversed, except in so far as the contraction of credit has made way.

At all points the country which has no position as a financial centre is at a disadvantage. When the exchanges turn against it, it must expect the remedial measures to work slowly. Such a country must therefore hold a relatively large gold reserve or be exposed to the danger of finding its reserve exhausted and its currency depreciated in an emergency.

To escape from this dilemma, to avoid the insecurity of a small reserve on the one hand, and the expense of a large one on the other, a system has been evolved which has of late years been widely adopted. Even if a country has no position at all as a financial centre, if no one draws bills on it even to finance its own import trade, there is nothing to prevent it investing in bills drawn on other countries. In time of stress, when the exchanges are adverse, people come to the central bank of the country to withdraw gold for export. This they do solely in order to obtain credits in exchange for the gold in foreign countries, and it would suit them just as well if the central bank could give them credits in those foreign countries instead. The central bank therefore makes a regular practice

of applying a part of its resources to the purchase of bills payable in one or more foreign centres, selected as being those where traders are most likely to want credits.¹ The bills must, of course, be bought after acceptance and must be presented for payment, if still held, at maturity, and consequently the central bank must have some agency or representative in the centre on which they are drawn. While they are held they may be either left in this centre, or taken home by the central bank. When the exchanges become adverse the central bank can come into the foreign exchange market and either offer the actual foreign bills for sale, or itself draw bills on the foreign centre in favour of traders who want to remit thither. The essence of the arrangement is that the central bank should have the command of assets at the foreign centre. Bills accepted at that centre are a convenient form for such assets to take, but money lent at call or on deposit or invested in easily realisable securities would serve as well. The possession of such assets in any form enables the central bank to redress the balance in the exchange market by offering for sale bills drawn upon them.

This system has the double advantage that it acts on the exchanges even more directly and quickly than the export of gold, and that the bills or other foreign assets, unlike gold, yield interest. The accumulation of a vast reserve of gold is sheer waste, except for the financial stability which it gives, and if that stability can be equally well gained without the sacrifice involved in sterilising so great a part of the country's wealth, there is no reason for incurring this waste. Just as gold reserves are usually kept primarily to secure the convertibility and the parity of a paper currency, so foreign bills or balances abroad are maintained for the same purpose. When the exchanges become adverse, bills on foreign centres are sold and are paid for with legal tender paper, which is thus withdrawn from circulation. Obviously the whole system depends on the paper being definitely withdrawn; if it is lent out again, nothing will have been achieved towards restoring

¹ See J. M. Keynes, "Indian Currency and Finance," chap. vi.



the exchanges, the central bank will merely have substituted assets at home for assets abroad. If the paper when once withdrawn is withheld from circulation, the same effect ensues as from an export of gold ; the purchasing power in circulation is diminished by that amount, but, in order that a proportional reduction may be made in the stock of credit, the rate of interest must be kept up.

It does not much matter in what country the foreign assets are held, provided it be a sufficiently important financial centre for bills upon it to be always in considerable demand. If the bills can be sold at all, the necessary withdrawal of legal tender paper can be carried out, and even if the chief demand is for exchange on a different financial centre the sale of the bills will transfer the strain of that demand to the centre on which they are drawn.

If the banks of every country held among their assets a substantial amount of bills or other loans payable at maturity in other countries, all could regulate their foreign exchanges without any transmission of actual gold. In practice, of course, countries are not willing to be unduly dependent on their neighbours in so important a matter as the regulation of credit or currency, if only because a war might at any time cut them off from one or other of the financial centres in which their foreign assets are situated. But in spite of this risk Russia, Austria-Hungary, Japan, Argentina, Greece, the three Scandinavian countries, have all made some use of this convenient substitute for a gold reserve, and colonial dependencies, being free from the war risk, have in some cases based their whole currency system on assets held for the purpose in their mother countries. India, Nigeria, the Straits Settlements, the Philippines, the Dutch East Indies, and German East Africa are instances. In these cases it is not merely a note issue which is so regulated but a silver coinage system. If there were a free coinage of silver, the unit of value would of course be silver, but silver is only coined at the discretion of the Government, and by limiting the amount coined the value of the standard coin is kept up (in accordance with the quantity theory) to something materially above the market value of the

silver bullion of which it is composed. An over-valued silver coin or "token" of this kind has been called a "note printed on silver," and *provided* the fluctuations in the value of silver do not bring its intrinsic value up to its nominal value, it behaves in exactly the same way as a legal tender paper currency. The value of the Indian rupee is kept within a fraction at the ratio of 15 rupees to £1, by means of the Indian Government's exchange operations in London.¹ A considerable part of the taxes collected by the Indian Government in India have to be remitted to London to pay interest on the Indian debt, pension charges and other liabilities due in England. The Indian Government effects these remittances by periodically offering for sale in London bills and telegraphic transfers on India. If it always sold as much as it could and no more at the par of exchange, 1s. 4d. to the rupee, the exchange would tend to be permanently at that figure. If the rupee began to depreciate, people would be unwilling to offer 1s. 4d. for it, and the Indian Government would sell none. It would pay its London liabilities from reserves which it keeps in London for the purpose, and it would retain the corresponding rupees in its vaults in India. If, on the other hand, the rupee tended to appreciate, there would be a great demand for rupees at the fixed price of 1s. 4d., and the Indian Government would receive more money than it needed to meet its liabilities in London. It would pass the surplus into its reserve in London, and would issue rupees from its reserves in India to pay the bills and telegraphic transfers sold in London. If it had to coin fresh rupees, it would pay for the silver from its reserves in London, but the *profit* on the coinage of the rupees would of course remain in those reserves. Thus, the issue of rupees into circulation and their withdrawal would be nicely regulated so as to prevent the exchange in London ever varying from par. The actual manner of proceeding is slightly more complicated than this, since the Indian Government does not stop selling rupees unless their value falls $\frac{5d}{32}$ below par, nor does it sell them in unlimited quantities.

¹ I refer, of course, to pre-war conditions.

unless their value rises $\frac{5d.}{32}$ above par. The margin of $\frac{5d.}{32}$ either way is taken to represent the cost of sending gold instead of buying exchange, and the system is thus not to keep the exchange at par but to keep it within the specie points. It sometimes happens that the Indian exchange threatens to fall below 1s. 3d. $\frac{27d.}{32}$ notwithstanding that the Indian Government is selling no rupees. In such a case the Indian Government offers to sell bills or transfers on London in India in unlimited quantities, and it pays the bills or transfers out of the assets which it holds in reserve in London. The system is thus complete, and would ensure the maintenance of the gold value of the rupee without the use of any actual gold whatever. Nevertheless it is the policy of the Indian Government to maintain a gold reserve in India, and also to keep a gold reserve in London. This London gold reserve forms part of the London assets necessary for the working of the scheme. It is not merely a bank credit payable in gold on demand; it is a stock of actual metal "earmarked" at the Bank of England as the property of the Indian Government. That is to say it is not paid into the Indian Government's banking account, but is left in the Bank of England's vaults merely for safe-keeping, like a private customer's deposit of jewels or securities.

But the extreme of economy of gold which is characteristic of the gold exchange standard is only possible for a country which is in close union, and therefore likely always to be at peace, with the centre on which the exchange standard is based. Independent countries, though they may supplement their gold with balances abroad, prefer to base the maintenance of the gold value of their currencies on gold kept within their own borders.

The inclusion among the bankers' assets of bills based on international trade is not of course the only factor which goes to determine the sensitiveness of a credit system to changes in the bank rate. Much depends upon the character of the country's business, and on the proportion of it which is financed

on credit. The class most dependent on credit and most sensitive to credit movements being the merchants, a predominantly commercial country will be correspondingly sensitive, and its credit system will be the more easily controlled. Manufacturers on a large scale, though less sensitive and possessing less power of economic initiative than the merchants, are nevertheless large temporary borrowers. The manufacturer being a purchaser of raw material and a seller of his finished product, has some of the characteristics of a merchant. He will tend to let his stocks of raw material run down at a time when he cannot borrow on favourable terms, though his desire to keep his works going will lead him to buy under conditions when a merchant would not. Sometimes, actuated by the same motive, he will manufacture for stock, when he has no orders on hand, and when he has no immediate hope of selling. In order to carry greater stocks of unsold goods than usual, he must borrow, and the terms on which he can borrow will affect his action in some degree, though not to the same extent as that of a merchant in similar circumstances.

But dealing and manufacturing are only a part of the world's business. A very large part of the population of the world is engaged in agriculture. The dealer in agricultural produce is like any other dealer ; he borrows when he buys and repays when he sells, and requires the assistance of a banker to finance him. A farmer on a large scale may likewise employ credit. By borrowing in anticipation of his harvest and repaying when it is reaped, he can economise his balances like the merchant or manufacturer. But the small peasant does not do this. His unaided credit does not enable him to borrow, and his business is too small to support a banking account. He sells his crops for money, whether metal or paper, and gradually draws on the money in the interval before his next harvest. A nation of peasants, like India or Egypt, develops comparatively little banking business for its own needs. If even the necessary mercantile business of such a country is financed by its richer neighbours, its currency is almost completely insensitive to banking

control. When foreign nations contract credit, it can do nothing to keep pace; it must remain passive while its peasant population, finding their sales in foreign markets diminished, gradually pay away their hoards, till the shrinkage of purchasing power brings down prices to the international level.

It may seem mysterious that so slight a change as an increase in the rate of interest on temporary loans by 1 or 2 per cent. should have such far-reaching results. The explanation is in part to be found in the immediate reaction on the merchants, who are the economic leaders. But the effect is very much intensified by the fact that a contraction of credit starts a fall in the prices of commodities, and a fall in prices itself has the same effect as a further rise in the rate of interest. We saw in Chapter II. how rising prices operate as an inducement to merchants to increase their stocks, and that the rate of interest, in order to lead to a diminution of stocks, must be high enough to offset this. And just as rising prices augment the merchant's profit, and lead him to accelerate his purchases, so falling prices diminish it and lead him to accelerate his sales. In fact, once the rate of interest has begun to take effect and to depress prices, the fall of prices itself reinforces its effects. This is one more instance of a phenomenon which is constantly recurring in the theory of credit and which is indeed at the root of the inherent instability of credit; a disturbing cause gives rise to ulterior effects which in turn have a tendency to stimulate the cause itself. When credit has definitely turned the corner and a contraction has succeeded to an expansion, the downward tendency of prices is sufficient to maintain the process of contraction, even though the rate of interest is no longer, according to ordinary standards, high. Merchants who cannot see their way to sell at a remunerative price are quite reluctant enough to buy, without the added discouragement of high interest. To put the same thing from another point of view, the monetary unit is *rising* in value, and a borrower quite apart from the charge for interest, has to repay a greater amount of purchasing power in terms of commodities than he originally received.

During an expansion of credit, prices are rising and profits

are high, and the rate of interest rises in sympathy with profits. The expansion culminates and ends with a further rise in the rate of interest to the point at which it just offsets the expectation of profit, and thereupon there ensues a period of contracting credit and *low* interest. And even after the bank reserves have been everywhere restored to the normal proportion of the banks' liabilities, interest will continue low for a further period in order to induce merchants to resume the business of borrowing and buying. The history of the London money market is full of examples of this alternation of high and low interest. The periodicity of expansions and contractions of credit has for long attracted the attention of economists. In another work,¹ I have endeavoured to show how this periodicity is the natural result of the slow response of people's cash balances, or, in other words, of the cash portion of the unspent margin, to credit movements. Credit is easily induced to expand, but its expansion is not immediately accompanied by a proportionate increase in the earnings of the working classes or in their power to absorb cash. Even when earnings do show a material increase, this goes to a great extent not in increased balances but in increased expenditure. In so far as the money paid out on one pay day comes back through the shops to the banks by the next, no additional strain is put upon the banks' cash reserves. From the time when earnings first rise there begins a gradual accretion of people's cash balances, which will continue until these balances are in due proportion to the increased earnings. But even if there were no *further* increase in earnings, this process would take a considerable time. So long as credit is expanding, earnings are increasing. When credit begins to contract, earnings are at the maximum, and the cash portion of the unspent margin is still short of the level corresponding to this maximum. The wage-earners are in fact still absorbing more money than they spend. The first impact of the credit contraction falls on profits; wages cannot be immediately reduced, nor will even employment slacken until pending contracts have been worked through. There therefore intervenes a period

¹ "Good and Bad Trade."

when the absorption of money into circulation continues notwithstanding the contraction of credit. At last the current is reversed, and the drain of money first ceases and then is replaced by a return of money to the banks. The depletion of people's cash balances is as gradual as their accumulation, and the return of money from circulation continues for a long time after the banks have ceased to contract credit. When the revival of business begins, there is a great accumulation of superfluous cash in the banks, which provides the opportunity for a renewed credit expansion. The whole cycle occupies usually from seven to ten years, though it may be interrupted by wars and other accidents by which credit movements are affected. The trade expansion which was already showing signs of slackening in 1914, was followed by an orgy of inflated and artificial prosperity at the outbreak of war, just as, more than a century before, the period of expansion which collapsed with the outbreak of war in 1793, was immediately followed by a renewed expansion which culminated in a crisis only four years later.

The trade cycles are distinguished by a number of symptoms. Well known as they have long been, it is only in the past half-century that statistics have been recorded in so complete a form as to afford a full practical verification of the theory. The period of credit expansion is marked by rising prices, high profits, good employment, rising wages, high interest, falling bank reserves. The period of credit contraction is marked by falling prices, low profits, bad employment, falling wages, low interest, rising bank reserves.

CHAPTER IX.

FINANCIAL CRISES.

IF the remedy for a disorder in the currency system is to be found in the control of credit, we have to consider not only the sensitiveness of credit to the control exercised by the banks, but also the possible magnitude of the disorder to which the remedy is to be applied.

What is the greatest strain to which the currency system of a country is likely ever to be subjected?

From the point of view of any single nation the problem presents itself as that of controlling the foreign exchanges, and the maximum strain means the maximum drain of gold.

We have already seen that credit is by nature unruly. It is always straining at its tether, or rather, it is perpetually starting to run away, and then being pulled up with a jerk when the limit of inflation consistent with the maintenance of the metallic standard is reached. Even with the test of the foreign exchanges always at hand to give warning when the situation is getting out of hand, the necessary precautions may nevertheless not be taken, and the result will be a breakdown. It may be that with some new development of business the banks, from sheer inexperience, are beguiled into the easy path of granting credit in ever growing volume. They follow the line of least resistance, like a novice in the art of bicycling, who spins gaily along before the wind for the first time, surprised and delighted to cover the ground so easily, and without suspicion of the struggle awaiting him when he has to return against the wind. Or it may happen that a Government is driven under the stress of some imperative need to create credits, which are known all the time to endanger the value of its currency. This happens above all in time of war, and

indeed the effect of war on credit and currency is of such special importance that it will require separate consideration at a later stage.¹ Against the folly or ignorance of bankers and governments and against the stress of war no gold reserve, however great, is an adequate protection. It is easy to see how the line of least resistance will always lead to greater and greater inflation. If an inflation of credits once begins, the consequences will be felt in a withdrawal of gold. In a country with a paper currency dependent on the supply of gold, as much as in one with a gold currency, this will produce what to the banker and trader appears to be a shortage of currency. They will clamour for *more* currency, and, in so far as they are guided by their immediate interests, will resist proposals for raising the rate of interest and restricting credits. It might be supposed that a rise in the rate of interest would be profitable and attractive to the banker, since his profits are proportional to the rate of interest which he charges to his customers. In practice, however, this is not so. The first step is to raise not the market rate but the bank rate. The market rate only follows the bank rate because the high bank rate obstructs advances of legal tender money from the central bank. In the first instance therefore a high bank rate intensifies the shortage of currency and increases the embarrassments of the bankers. It is a poor consolation to the banker, who sees his cash reserves dwindling, that the corresponding contraction in his business will necessitate an increase in the rate of interest which he charges to his customers. He cares more to increase, or at any rate to maintain, the extent of his business than to reap such additional profit as even a high rate of interest will give him for a short time on a reduced volume of loans. To the trader the high rate of interest presents itself in the first instance as an expense to be subtracted from his profits, but behind this initial loss looms the far more serious menace of a difficulty in borrowing, which will affect not merely himself but those to whom he hopes to sell. A central bank or a government will only be human if before the protests of the business world it shrinks from the paradoxical course of

¹ See chaps. xiii.-xvi.

remedyng a shortage of currency by making a still greater shortage. If it gives way, if it tries to make up the shortage of currency by further issues, and does not at the same time insist on a high rate of interest, the inflation of credit will quickly be intensified, the fresh supply of currency will be steadily drained away into circulation, and the withdrawal of gold for export will continue. There will soon follow a renewed clamour for more currency, and, if the same situation is dealt with in the same way, it is inevitable that the system by which the note issue is related to the stock of gold will break down. There will be one of those infringements or amendments of the law to which we referred in Chapter V. This will be an opportunity for a reconsideration of policy; if the opportunity passes and still there is no restriction of credit, the next stage will be the actual or threatened exhaustion of the stock of gold and a suspension of specie payments. The moment the free payment of the legal tender notes in gold stops, they will begin to fall to a discount, and the foreign exchanges, already up to the export specie point, will become more adverse still. The failure to maintain specie payments marks the cutting adrift of the country's currency system from that of the gold-using world; it means that business, which till then has been stimulated by the inflated turn-over of credit and therefore of purchasing power, begins to be disorganised by doubt as to the value of the monetary unit. Its value is palpably falling, but no one knows how rapidly it will fall; it cannot be permitted to fall indefinitely, or all measure of value will be lost, but no one knows when the limit will be reached or a recovery will begin. The recovery can still be started by a high rate of interest, but even without that the mere disorganisation of business may of itself check borrowing and help to stop further inflation. Once the vicious circle of expanding credits and rising prices has been broken, the central bank can regain control of the situation, but the accumulation of unexecuted orders to producers which usually accompanies a period of inflation, will probably prolong the expansion of credit for some time after the loss of confidence has begun. It is likely therefore that before stable conditions have returned

there will be a material depreciation of the currency. If the old standard is ever to be regained there must ensue a long and painful period of contracted credit.

There has been so much bitter experience of this rake's progress in nearly every country of the world, that nowadays the great central banks are alive to the importance of keeping control. Perpetually watching the foreign exchanges, all keep pace together, and so long as they do so, no serious gold movements occur, except for the usual stream of metal from the gold-mining countries. It was shown in Chapter VI. that as a result credit expansions and contractions tend to be world-wide, though the susceptibility of any particular country to their effects will depend upon its special circumstances. A world-wide contraction is only necessitated by a pre-existing expansion. The countries which participate in the expansion experience a growing demand for money for internal circulation. This demand denudes the banks of their reserves of legal tender money, and they in turn have to draw fresh supplies from the central bank. The time arrives when in one or more countries these fresh supplies cannot be provided without denuding the surplus reserves of gold and running the risk of a breach of the law by which the paper currency is regulated. At this point the contraction of credit begins. The centres so threatened raise the rate of interest or take other means of contracting credit, and as soon as these measures become effective they begin to draw gold from abroad. But other countries will for the most part be unable to spare gold, and must respond by raising the rate of interest in their turn. In a short time credit begins to contract everywhere. But the different financial centres are likely to find it more difficult to keep pace in a credit contraction than in a credit expansion. In a general credit expansion the country which gets a little ahead can easily slow down by raising the rate of interest somewhat above the prevailing level. In a general credit contraction the country which drops behind can only save itself by increasing the pressure which, though perhaps already great, has been found insufficient. If drastic action be then taken, resulting in a correspondingly severe

fall in the values of commodities and securities, there may ensue a financial crisis.

The characteristic of a crisis is wide-spread bankruptcy. The fall of values diminishes the assets without lightening the liabilities of the merchant who is carrying on business with borrowed money. The failure of the merchant may endanger the solvency of his banker, whose assets, though so long as they are good they are of a fixed money value, depend for their security on the assets of his customers. The failure of some banks, coupled with the reluctance of those which remain to lend, drives traders to sell instead of borrowing, in order to raise the ready money necessary to meet their immediate liabilities. The extreme rigour of the crisis is due to the depreciation of values, already great enough in consequence of the contraction of credit, being intensified by these forced sales. The catastrophic fall of prices is reflected in a violently *favourable* movement of the foreign exchanges. Gold pours in, and other countries, to safeguard their gold reserves, must resort to a contraction of credit almost as drastic as in the crisis centre itself.

Probably of all the different strains, apart from war, to which a currency system may be exposed, that of a serious *external* crisis, that is to say, a crisis in a neighbouring country of commercial and financial importance, is the most severe. A country subjected to this maximum strain suffers a drain of gold, due to causes beyond its own control, which arises with great suddenness and can only be counteracted by drastic measures for the contraction of credit. These measures themselves may cause so disastrous a fall of values as to lead to a crisis at home, and in that case the remedy may be worse than the disease.

In a financial crisis there are two quite distinct causes at work to depress prices and to make the foreign exchanges favourable, and these two causes, though frequently found in conjunction, may sometimes occur separately. First, there is the curtailment of credit by the banks in consequence of the shortage of legal tender currency and the depletion of their reserves; and, secondly, there is the impairment of the

solvency of both the banks and their customers. It is clear that the impairment of solvency might occur without any shortage of legal tender currency. A single very large failure (which may be the result not of a sudden drop in prices but of a long course of imprudent trading, successfully concealed until the deficiency of assets has become overwhelming) may lead to a multitude of others. A sudden change in the conditions of supply of a single commodity or in the demand for it may land a number of speculators in bankruptcy. Whatever the cause, a series of commercial failures will destroy a part of the assets of the banks. This may not of itself restrict the operations of the banks in any degree; for a bank which has suffered losses can best recover its position by maintaining or even extending its business and using a part of its profits to build up a capital reserve. But a crop of business failures is almost certain to make the banks cautious in lending. They will be less likely to lend on the unsupported security of a merchant who may to-morrow suffer the same disasters that brought down his neighbours yesterday. And every firm which was a creditor of those which have failed has lost thereby some of its margin of solvency, and has become a less desirable borrower than before. The reluctance of the banks to lend will diminish the total sums lent, and this retardation of the fabrication of new credit will have just the same effect in the first instance as if it had been undertaken expressly to check inflation. But if the commercial failures have occurred at a time when there is no inflation and when, therefore, the cash reserves of the banks bear an adequate proportion to their liabilities, the curtailment of credit is not likely to last long. Anxious though they may be to avoid lending to those traders whose solvency is under suspicion, the banks will be ready enough to lend to anyone whose solvency is beyond doubt, or who can offer ample security. In proportion as their business has shrunk in consequence of their caution in dealing with the former class, they will be eager to extend it by increasing the accommodation which they grant to the latter.

Commercial failures, however, may have a more serious

effect than this upon the supply of credit. If they are severe enough they may ruin the banks which have lent to the insolvent firms. The failure of an important bank has a most violent effect upon credit operations. The obligations of a solvent bank are from the point of view of its creditors simply the equivalent of so much money. Let the bank become insolvent, and these obligations are as it were petrified. They become deferred claims to share in a fund of problematical value. If there is a prospect of the assets turning out well, other banks may grant cautious loans on the security of these claims, but well within their face-value. But a great part at any rate of the purchasing power represented by the defunct bank's liabilities is annihilated.

Again, a bank knows its customers' affairs, and if it fails they cannot so readily obtain loans from other banks to whom they are strangers. Therefore not only does the prospect of the loss of at any rate a part of the sums due to them from their bankers weaken their financial position, but they cannot easily find lenders willing to advance even such loans as their financial position still justifies. The destroyed purchasing power cannot be immediately replaced, and till it begins to be replaced the consumers' outlay will be proportionately less than before. The country becomes a bad market to sell in, and prices fall. But the traders and stock-jobbers who carry on business with borrowed money, and who find their bank balances suddenly impounded and their borrowing power curtailed or suspended, are driven to sell whatever wealth they can realise. Helpless in the flagging home market, they rush to offer goods and securities in any foreign market where they can find purchasers. And the foreign purchasers, still free from credit difficulties in their own countries, are of course ready and eager to buy goods or securities at low prices. The sudden heaping up of credits in foreign countries at the disposal of traders who are in urgent need of ready money at home will of course immediately react upon the foreign exchanges. The exchanges will become very favourable and gold will flow in; this influx of gold will help to make up the shortage of purchasing power. If there were no recuperative

tendency in credit at all, the quantity of gold needed to restore equilibrium would be equal or comparable to the whole amount of credit money destroyed. If the crisis occurred in a country where credit is highly developed, the quantity of gold needed on this basis might be enormous. The amount of credit money in such a country may be three or five or even ten times the amount of gold. The banking deposits of the United States even before the war were much greater in total value than all the gold currency in the world. Those of the United Kingdom, though less even in proportion to population, were greater than all the gold currency in Europe. The banking deposits in other great commercial states ran to totals of several hundred millions each. If a crisis suddenly made a considerable gap in one of these vast totals, and the gap could only be filled by gold, a severe strain would be put upon the currency systems of all other countries. But if the crisis is merely commercial, and does not arise in the midst of a period of inflation when there is already a shortage of currency, there are several remedial tendencies at work. For one thing the extinction of a quantity of credit reduces the proportion of credit to money, and the banks are ready enough to increase their advances to solvent borrowers in order to restore the proportion. The sale of goods and securities abroad reduces the stocks of both, and makes the people who have sold them (and who will have reduced their indebtedness with the proceeds) ready to borrow afresh in order to accumulate new stocks while prices are still low. The gold imported increases the disproportion between credit and money, and adds to the willingness of the bankers to lend. In such conditions therefore the fabric of credit is likely to be very quickly reconstructed, and the amount of gold actually imported may be quite moderate.

In practice, however, commercial crises hardly ever occur in this detached form ; they are almost invariably associated with financial crises. So long as credit is expanding, unsound businesses can usually stave off bankruptcy, and it is the failure of markets and fall of values resulting from a contraction that bring them down. Prices have been forced up to a level at

which the currency systems of the world and the stock of gold cannot permanently maintain them. The drain of gold or of paper based on gold into circulation is the signal for the inevitable contraction of credit and deflation of values. This process of deflation threatens the solvency of the weaker traders. In any country where the expansion has been excessive and the contraction is proportionately severe a crisis may break out.

The distinguishing characteristic of a crisis is the pressure to sell, caused by the peril of bankruptcy. If a trader is in danger of failing, that is the result of a fall in the value of his stock in trade. He has been employing both his own capital and the advances he can get from his banker to buy goods, in the expectation that he can sell them, as fast as he buys them, at a rising price. Sales suddenly fall off—a sign that the period of expanding credit is at an end and that the banks are initiating a period of contraction. The unfortunate trader finds not merely that his goods cannot be turned into cash so quickly as he had hoped, but that he cannot get so much cash for those which he does sell, and that the value of the whole of the stocks on his hands has to be written down to the new level of prices. Failing to sell, he has to renew loans from his banker in order to carry the unsold stocks, and he may have to increase his indebtedness in order to pay for new consignments of goods, ordered before the tide began to turn, but only delivered afterwards. In such circumstances, even if the excess of his assets over his liabilities does not vanish altogether, it may well be that the margin is so narrow that he cannot provide good enough security to induce his banker to grant the accommodation he needs. In that case, if he is to meet his engagements, he *must* sell. But the curtailment of credit has already spoilt the home market, and it is the failure of the home market that is the cause of all his embarrassments. He is therefore driven to sell abroad if he can. But the remedial tendencies which would mitigate the severity of a purely commercial crisis are absent when the situation is complicated by currency difficulties. Foreign countries are themselves short of gold, or at any rate cannot spare gold consistently

with their currency laws. Banks, at home and abroad alike, are anxious not to extend but to curtail their advances even to solvent borrowers. The contraction of credit, in fact, and the consequent failure of demand are not local but world-wide. In proportion to the difficulty of selling, the depressing effect of the forced sales upon prices is intensified. Prices are for the moment at an artificially low level, and many traders, whose business according to the standards of normal times would be perfectly solvent, go under, simply because they can neither borrow nor sell.

But though crises arise out of a world-wide contraction of credit they are not themselves necessarily world-wide. As the contraction progresses, there may be a collapse in one country or another, and, if the crisis is severe and the country in which it occurs is important, the others may be subjected to a very heavy strain. But they may stand the strain. There are in fact two ways of escape from a state of inflation; a gradual way by means of a restriction of credit, and a violent way by means of widespread bankruptcy. The first, if applied too forcibly, may develop into the second. And if one country be unfortunate enough to suffer this disaster, it becomes difficult for the others to avoid it. The fall in values in the former has been accelerated, and has outstripped the fall elsewhere. Foreign markets, remaining at a higher level of values, are exposed to the stream of forced sales, and can only defend themselves against it by hastening to contract credit and to effect a corresponding fall of prices. Until they do so, the exchanges will be against them, and they will lose gold. Here the advantage of holding a large gold reserve in a crisis becomes apparent. The disparity of values in two countries stimulates imports into that in which values are higher, and checks imports into that in which values are lower, creating a balance of indebtedness from the former to the latter. So long as this balance of indebtedness can be discharged in gold, the disparity can continue. The possession of a stock of surplus gold may just enable a country to tide over the critical period with a gradual instead of a sudden reduction of prices. But no gold reserve is unlimited, and

if it is to fulfil its purpose a steady contraction of credit is essential. Otherwise the exhaustion of the reserve might find the country still at a level of prices above its neighbours, and faced with the choice between a contraction so precipitate as probably to cause a crisis, and a suspension of gold payments involving a temporary abandonment of the gold standard.

In fact if all countries are to maintain a gold standard all must suffer substantially the same fall of prices so far at any rate as foreign trade commodities are concerned. Nevertheless under this broad principle are hidden many complications. Quite apart from the temporary means of defence afforded by the use of a gold reserve to pay for an excess of imports, the vulnerability of a country at a time of crisis is affected by a great variety of commercial, financial, and industrial conditions.

When we speak of a credit movement, and in particular of a financial crisis, being world-wide, we mean that the changes in the standard of value are transmitted through the foreign exchanges. But the foreign exchanges are only affected by the purchase or sale of goods or securities abroad. To determine the susceptibility of a country to the contagion of a crisis we must consider to what extent it will in fact buy or sell goods or securities.

It will be convenient to consider goods first. The failure of demand and the pressure to sell, which characterise a crisis, will affect different commodities very unequally. The consumers' outlay is diminished in correspondence with the contraction of credit, and the man who finds he has less to spend will economise more drastically on some commodities than on others. He will economise more on luxuries than on necessities, and more on durable goods, which can be made to last a little longer than usual, than on those which are used up in the process of being consumed. He will economise more on tobacco than on bread, but more on boots than on tobacco. The demand for food, especially for the staple kinds of food, will be maintained; the demand for manufactured goods will flag. Where there are large accumulated stocks, especially if they are due to speculative buying during the preceding period of expansion, prices are likely to fall heavily.

And where the supply cannot be easily and promptly restricted, as in the case of most agricultural products, a similar effect follows. Raw materials of manufacture are often very sensitive in their price movements, the supply not accommodating itself quickly to changes in the demand for the finished product.

Now it may happen that the particular commodities most exposed to the failure of demand at the crisis centre do not play any considerable part in foreign trade. The dealers in these commodities are precluded from raising money on them abroad, perhaps because they do not suit foreign tastes, or perhaps because they will not bear transportation. The commodities which are exported or imported may happen to be such that the money demand for them is relatively little affected. The prices of these goods do not fall much, the merchants who deal in them suffer little or no embarrassment, and there is no appreciable pressure to sell. In such a case the imports rejected and the goods diverted from the home market to export would be small in volume, and foreign countries would experience but little of the effect of the crisis.

If on the other hand it be assumed that the foreign trade commodities are largely affected by the crisis, that among exports and imports are classes of goods the home demand for which has collapsed sensationaly, and that the consequent pressure to sell has resulted in a large decrease of imports and increase of exports, the effect on any particular foreign country may still be either great or small. The effect will of course depend on the extent to which the decrease of imports and increase of exports are felt in the trade with the foreign country concerned. If the foreign trade of that country with the crisis centre is large in proportion to the home trade of the former, and contains a large proportion of goods (whether exports or imports) which are sensitive to an adverse market—that is to say, such that the demand does and the supply does not contract easily when the consumers' outlay falls off—then the effect of the crisis on the foreign country will be great. If its foreign trade with the crisis centre is small, or contains a small proportion of sensitive commodities, the effect of the

crisis upon it will be correspondingly less. But, whether the effect be small or great, the immediate practical manifestation of it is a balance of indebtedness to the crisis centre. Traders in the crisis centre have acquired credits in the foreign country, and wish to transfer these credits into their own country. In the first instance only foreign trade commodities have been affected. The existence of the foreign demand makes the prices of these commodities fall less than they otherwise would at the crisis centre, while the influence of the crisis makes their prices fall abroad at a time when other commodities are unaffected. But as soon as traders at the crisis centre begin to withdraw their credits, other tendencies begin to operate. The balance between exports and imports having been upset, these credits can only be withdrawn in gold. Every foreign country from which credits are withdrawn therefore begins to lose gold. The loss of gold with which each is threatened corresponds to the amount of credits for which its banks have on balance become liable to traders in the crisis centre. A loss of gold will threaten the stability of the banks, and must be met by a restriction of credit. (For the moment we may leave the alternative of a suspension of gold payments out of account.) The extent of the restriction necessary will depend partly on the proportion of the threatened gold withdrawal to the whole stock of gold in the country, partly on the state of the gold reserves in comparison with outstanding credits at the time. It may be that the gold reserves are much above what is regarded as the standard proportion, and that the credits acquired by traders in the crisis centre are so moderate that practically no restriction of credit is necessary. In that case the prices of commodities other than foreign trade commodities will in the first instance be hardly affected. But in general some material restriction of credit will be necessary, and there will ensue all the consequences which we have already traced. The contraction in the consumers' outlay will make the country a worse market to sell in, and will deter the traders affected by the crisis from disposing of their goods and gaining credits there. If the threatened gold withdrawals largely exceed the amount of gold that can be spared,

and especially if, in a preceding period of inflation, the bank reserves have been denuded and latent demands for credit have been set in motion, so drastic a restriction of credit may be necessary as to precipitate a separate crisis in the country so situated. The country which is liable to suffer in this way is that whose foreign trade is large in comparison with its home trade, and whose exports and imports include a large proportion of goods sensitive to an adverse market. But of course it is just such a country that will spread the effects of its own crisis most extensively among its neighbours. Thus a third country, which in the first instance escaped the contagion through the insignificance of its intercourse with the original crisis centre, may succumb when a new crisis centre develops in a country with which its foreign trade is more extensive. By the time the full world effects of the original crisis and all the consequential crises have been felt, there will have been a general fall in the world prices of all the "sensitive" commodities included among the staples of international trade. The commodities in each country unsuitable for export and import will be more or less affected in price according as the country in question has been driven to make a more or less drastic restriction of credit. The commercial failures which are the special characteristic of a crisis are occasioned by the fall of prices, and they occur mainly among dealers in "sensitive" commodities, whether the sensitiveness be due to the normal conditions of demand and supply or to temporary circumstances such as recent speculative buying. Failures are also more likely to occur among dealers who are holding large stocks in proportion to their turn-over, whether they do so because it is the usual practice of their trade or because their stocks have been increased fortuitously above the usual amount.

Quite apart from its permanent economic position, chance may very greatly affect the responsiveness of a country to an external crisis. It is assailed through its foreign trade; the drain of gold is made possible by an increase of imports and a shrinkage of exports. But just at the moment of the crisis its exports might happen to be unusually large. A country

which exports agricultural produce on a large scale, for example, may have an exceptionally bountiful harvest. Under normal external conditions the consequent increase of exports would make the exchanges favourable and occasion an importation of gold. If the exceptional harvest coincides with a financial crisis in a neighbouring country, it may partly or wholly counteract the tendency of forced sales from the latter to increase imports and decrease exports, and on balance the exchanges may be hardly affected. Something like this occurred in the United States when the effects of the Baring crisis in 1890 were largely counteracted by the good harvest of 1891.

Whereas the forced sales of commodities come from dealers in those commodities, embarrassed by the failure of their market, the forced sales of securities come from two sources. They come partly from embarrassed dealers in securities, but partly also from traders and bankers who keep a reserve of securities to borrow on or in the last resort to sell, in case they cannot raise cash by any other means in an emergency. These reserves are naturally held as far as possible in securities of an international reputation, which can be readily sold abroad. As a rule the first premonitory symptom of a crisis is a stream of sales of these securities. A crisis does not break out without warning in the midst of a great trade expansion. According to the more usual sequence of events, the trade expansion is first of all checked by a drastic curtailment of credit, and there then follows an uneasy interval of perhaps some months while the weaker traders are battling against failing demand and falling prices to keep solvent. During this interval they will have recourse to the sale of their reserves of securities, and when these reserves are exhausted the failures will begin. A serious fall in the prices of securities will precede the crisis itself, and this will impair the solvency of the dealers in investments. But these dealers are at the same time as much exposed as the dealers in commodities to the adverse influence of the credit contraction. Indeed the nature of their market is such that they suffer more from the credit contraction than the merchants.

Just as the merchant depends on the consumers' demand to dispose of the commodities in which he deals, so the investment market depends on the investors' demand to absorb its securities. If its indebtedness to the banks is not to increase, the sale of securities to the public must keep pace with the new issues for which the market makes itself responsible. But while the initiative in ordering new consignments of commodities rests with the merchants, the investment market does not take the initiative in the production of new securities. The origination of new issues belongs rather to the promoters and borrowers, who are guided in their plans by the prospect of using advantageously or profitably the fixed capital on which the money borrowed is to be spent. At a time when credit is expanding and production is profitable and active, there is likely to be a great pressure of new issues to provide fixed capital for the increased production and so to take advantage of the favourable trade conditions. When the tide turns, and steps are taken to restrict credit, the consumers' outlay, of which investment forms part, suddenly shrinks. But the various schemes for the employment of fixed capital cannot be abruptly abandoned or even curtailed beyond a certain point. Underwriters have already been found for some; others are pressed on unwilling underwriters at the price of a large commission. The result is that, when investment suddenly shows a great falling off, the investment market finds itself loaded up with securities, largely new issues, which can only be carried by means of increased loans from the banks. Savings, being the surplus on income after all personal expenditure has been met, are very sensitive to changes in the amount of income. Investment is therefore the most variable part of the consumers' outlay, and the investment market has to face greater fluctuations in demand than the market for commodities. At the same time the forced sales of securities held by bankers and traders as reserves contribute further to the overloading of the market and the depreciation of security values. Thus the solvency of stock-jobbers and finance companies is more likely to be threatened even than that of the merchants, and forced sales of securities will be an even

more characteristic feature of a crisis than forced sales of commodities.

Stock exchange securities fall broadly into two classes—shares, whether ordinary or preference, which yield *variable* dividends; and debentures, Government stocks, municipal stocks, bonds, etc., which yield *fixed* dividends or interest. Variable dividends depend on profits, and are susceptible to all the influences which affect the market for the goods or services produced. When easy credit stimulates trade and prices rise, profits and dividends are high, and the prices of shares are high, for the prospect of high dividends even for no more than two or three years, adds very materially to the value of shares. When credit contracts and prices and profits fall, shares fall. Fixed interest-bearing securities tend to follow exactly the contrary rule. When trade is active and high profits can be obtained from the use of money in trade, the prevailing rate of interest is high, and consequently the price of a security bearing a fixed rate of interest is low. When trade is bad and profits low, the price of a fixed-interest security rises. At a time of crisis, and in the uneasy period which precedes it, the prices of all securities are depressed. Shares fall because trade has passed its zenith; fixed-interest securities fall because of the forced sales.

The extent of the forced sales will depend largely on the quantity of "international" securities held in the crisis centre. The traders and bankers who are in difficulties will sell all they can. Dealers in investments will also be sellers, in order that they may be in a position to buy other securities which, having no foreign market, can be had at low prices. The private investor, however, will not want to sell just when prices are exceptionally low. On the contrary he will tend to accelerate his purchases of investments; he will risk a reduction of his banking account below its usual level in order to get good investments cheap, and will thereby help to relieve the situation.

The appetite of foreign markets for the securities will depend on two factors—the actual or prospective investment demand and the financial position of the investment markets.

Dealers will be glad to get securities cheap if they can foresee a demand for them, but they will not be willing to buy them unless they can pay for them without increasing their indebtedness to their bankers to an inconvenient extent. Here we see one of the advantages of a country which has withstood the temptation to indulge in credit inflation ; it can afford to grant credits to the dealers in investments, who therefore can buy securities on advantageous terms, and at the same time relieve the needs of its distressed neighbours.

Perhaps the most important factor of all in determining the dissemination of a financial crisis is the distribution of international investment in new issues.

A severe crisis will very nearly bring new issues to a dead stop so far as this is possible ; those which are already under way will remain as a source of embarrassment first to the underwriters and then to the investment market as a whole. Now new issues are very largely required for the development of new countries. Consequently under normal conditions there is a steady export of capital from old countries to new. When credit is expanding all over the world this export of capital increases in volume. The consumers' outlay is greater ; the surplus of it available for investment is greater even in proportion ; the openings for investment in new countries are made more profitable by the active demand for commodities. If the expansion of credit culminates in a crisis, the export of capital suddenly contracts again. The suddenness of the reaction depends partly on the extent to which the underwriters of the new issues are exposed to the effects of the crisis. If they remain solvent they must provide the money according to their bargains and the new works will continue. But even if they remain solvent, work which has not actually been begun is likely to be postponed, and, if they fail, undertakings which are already in progress may have to be suspended or abandoned. Therefore there may be a very abrupt diminution in the importation of capital into a new country. This would have an important effect on the foreign exchanges. While the crisis itself makes the exchanges on the crisis centre in all other countries unfavourable to these latter, the stoppage

of foreign investment is an additional influence making the exchanges unfavourable in all new countries or countries which are normally borrowers, and making them favourable in the countries which are normally lenders. In the former the effect of the crisis is enhanced, in the latter mitigated.

When a new or borrowing country is itself the scene of a crisis, the collapse of markets there is likely to discourage investment, and the slackening of investment will have an adverse influence on the foreign exchanges. This will tend to counteract the effect of the forced sales in foreign markets, and to impair the power of the country to draw gold from abroad. Consequently new countries are more likely than old to lose control in a crisis and to fail to maintain gold payments.

The susceptibility of a country to the influence of an external crisis may be affected by transitory movements of capital as much as by temporary movements of commodities. If it is just embarking on a large borrowing operation when the crisis breaks out, and if the borrowing operation is not interrupted by the crisis, the favourable movement of the exchanges required to finance the borrowing will tend to counteract the adverse movement caused by the crisis. The stress of a crisis is transitory, and may be tided over in this way, though, when the tale of bankruptcies is complete and the forced sales are past, the borrowing country will find that it must accommodate itself to a new level of money values. It must then face a part at any rate of the ordeal through which its neighbours have passed; it must restrict credit until the foreign exchanges have recovered equilibrium. In fact the disadvantage of remedying adverse foreign exchanges by borrowing abroad is that the remedial effect only lasts while the borrowing continues. The mere cessation or slackening of the borrowing produces an unfavourable reaction in the exchanges, quite apart from any repayment of the sums borrowed (for we are here considering not temporary borrowing but permanent borrowing or long-term investment).

A very important factor in increasing the vulnerability of a country in case of a crisis is an excess of speculation, either

in commodities or in securities. Securities present the best opportunities for speculation owing to their wide fluctuations of value. A concern which has to pay not only working expenses but interest on a large loan capital before it produces any distributable profits may yield very fluctuating dividends. If it has a capital of £1,000,000, of which one-half is in 5 per cent. debentures, then gross receipts of, say, £200,000, less working expenses of, say, £150,000, would leave a net profit of £50,000, which would pay the debenture interest of £25,000, together with 5 per cent. on the £500,000 of share capital. If the gross receipts rise 20 per cent. and the working expenses 10 per cent., the former will be £240,000 and the latter £165,000. The net profit will be £75,000, which will be sufficient to pay the debenture interest and leave £50,000 to pay a 10 per cent. dividend on the shares. Thus the dividend can be doubled by a moderate increase of prices and output. The shareholder is the residuary beneficiary of the speculative profits, and where the rise of price is large the increase in dividends may be enormous. A dividend of, say, 30 or 40 per cent. with a prospect of two or three future dividends on a similar scale will send the market value of the shares soaring upwards.

Now the speculator buys shares with a view to selling them again at a profit, and he buys them with borrowed money. To attain success in his venture he relies on his knowledge of the particular shares which he has bought and of the psychology of the investors and of his fellow-speculators. If he is wise, he will without doubt keep watch also on the money market conditions, but he will be a very exceptional speculator indeed if he is prepared for all the reactions of the contraction of credit, when it comes, upon commodity values and the investment demand. A crisis almost invariably takes the main body of speculators by surprise. Manufacturers and merchants usually borrow for fixed periods, and in the interval before payment falls due they are free from pressure to repay, whatever storms may break out in the money markets. But the speculator in securities usually borrows either "at call" (i.e., as in New York) he may be called upon to repay at any

time), or else for short periods, e.g. from one London Stock Exchange account to another, these accounts coming twice a month. A sudden general fall in the values of speculative shares precipitates a wholesale calling up of loans. A feature of financial crises in the United States is the violent rise in the rate of interest on call money, which sometimes rises in the form of a commission on renewal as high as $\frac{1}{2}$ per cent. per day.¹

Speculators in stocks are so especially exposed to the strain of a crisis, that particular crises are very commonly explained as due to "over-speculation". In point of fact, however, there are examples of periods of furious speculation which led to no crisis at all. The "Kaffir boom" of the 'nineties expended itself without any crisis, and several years of sound trade intervened before the comparatively insignificant crisis of 1901 in Germany ushered in the depression of trade of 1902-5. The rubber boom of 1910 came at a time when trade was recovering from the great American crisis of 1907; there was no credit inflation at the time, no serious financial crisis occurred anywhere, and the trade recovery continued unbroken till 1913.

Speculation in fact may be induced either by the discovery of some new opening for investment, or by the general rise of commodity values and increase of investment demand, which occur at a time of trade expansion. In the former case over-speculation causes nothing worse than the embarrassment of the speculators; but in the latter over-speculation is one among several symptoms of an unsound credit position.

Speculation in commodities, though usually less conspicuous than speculation in securities, is nevertheless important. But the line between prudent and imprudent trading with borrowed money is here more difficult to draw. Though commodities may occasionally exhibit sensational variations of prices, their values do not depend, like the values of shares, on conjectural calculations as to the distant future, and they are

¹ In 1884 call money is said to have been quoted at the fantastic rate of 4 per cent. per day. This, the price of one day's respite from bankruptcy, was more like blackmail than interest.

not liable to become absolutely valueless, even though they may be "unsaleable" at anything that the holders would regard as a reasonable price. Undeniably it is reasonable for a dealer to increase his purchases in a rising market; and this he can only do at the cost of increasing his indebtedness. The dealer who is caught by the fall loaded up with stocks is blamed as a speculator, when it may be chance rather than caution or foresight which led his neighbour to sell off in time. One test, however, may fairly be applied. When a dealer borrows to extend his operations in a rising market, he ought to be as cautious as possible in distributing his profits. If, instead of spending his profits on himself as he realises them, or (in the case of a company) increasing dividends to the utmost legitimate limit, he puts back everything beyond the normal profit into the business to build up a reserve, this policy will steadily diminish his indebtedness, and by the time the period of prosperity is succeeded by the inevitable setback, his indebtedness may be no greater than at the beginning, notwithstanding the increase in his stocks. It is hardly necessary to point out what an element of strength traders who follow this course will be in a country which has to face a crisis. Indeed the crisis itself grows out of the weakness of individual firms, and if all were strong, if all had kept down their indebtedness to such a figure that no practically conceivable depreciation of their assets could threaten their solvency, there could be no crisis.

While credit is expanding, a crisis is very unlikely to occur. Whatever may happen to particular individuals, there will be a general tendency for assets to grow faster than liabilities. But crises may occur at any stage of a credit contraction. The same period of contraction may be marked by a series of crises in widely-separated centres at considerable intervals.

In view of the variety of circumstances by which the effect of a crisis in one country on another may be accentuated or diminished or delayed, it is not surprising that the crises which occur in a single period of contraction do not exactly synchronise. In 1836 a severe crisis broke out in England. In

1837 it spread to the United States. In 1838 when England had already entered upon a period of quiet recuperation, it broke out in Belgium, France, and Germany, and in 1839 it spread again to England and the United States.

The crisis of May, 1866, in London, one of the most severe ever experienced, though apparently isolated, was really the sequel of the crisis of the autumn of 1864, which extended over the Continent, but which was not so acute in any one centre. Failures were fairly numerous in 1864 both in England and elsewhere, and the bank rate was raised to 9 per cent. in London and 8 per cent. in Paris. As it turned out, the pressure on the money market was sufficient to stop the credit expansion in France, but not in England. Apparently the explanation is that, whereas in France the trade activity had been mainly commercial, in England it had been rather in the nature of capital speculation. Under the influence of recent legislation there was an immense development of limited liability companies. In particular there were a number of new finance companies, which adopted the very dangerous practice of making temporary advances to railway contractors on the security of shares in the new railways. The effect was that after the mercantile failures of October, 1864, in which England had her full share, the credit expansion was continued in the form of advances for capital expenditure. So long as the public could be induced to buy shares rather than commodities the inflation of the consumers' income did not result in an undue amount of purchases from abroad, or make the exchanges unfavourable. An isolated credit expansion thus held progress in England, when the similar movement abroad had already been brought to an end by the crisis of 1864 and the accompanying fall in values. Finally, in May, 1866, after an interval of a year and a half, the crash came with the failure of Overend & Gurney, one of the largest finance companies, and of a number of other important banks and financial houses. There supervened a condition of things which puzzled economists, both then and since. For two months the bank rate remained at 10 per cent., while the bank rate in Paris was no more than 4 and 5 per cent. Yet gold was not attracted from

France to England. The magic of the bank rate seemed to have vanished. Macleod attributed this phenomenon to a complete loss of confidence in English borrowers. Continental lenders would not risk the loss of their capital for the sake even of 10 per cent. interest. No doubt credit was shaken, but that it was shaken to this extent is hardly conceivable. The credit expansion having continued in England after it had ceased abroad, it was only natural that time should be needed to bring down values in England to the continental level. Neither the forced sales of the crisis nor the pressure of 10 per cent. would necessarily have this effect immediately, especially as the disposable assets of the finance companies which collapsed were largely shares in speculative English railways which could certainly not be sold abroad. Probably the English money market was so swollen with credit that when the tide of speculative investment ebbed, the exchanges would, but for the remedial effects of the crisis itself, have become violently unfavourable. The reason why foreign lenders did not take advantage of the 10 per cent. bank rate in London was that they feared that these unsound conditions might necessitate a suspension of gold payments and a failure of the gold standard. It was not the insolvency of the borrowers that deterred them, but the possibility of a loss by exchange.

The year 1890 saw a period of great trade activity culminate in a financial crisis, marked by the suspension of Baring Bros. in London. The ebb set in in Europe thenceforward, but the United States for the moment escaped its effects, thanks to a splendid harvest and a new tariff. In 1892 there began that export of gold which was a sure sign that values were on a higher level in the United States than elsewhere, and in the first half of 1893 the export was accelerated. There ensued the inevitable contraction of credit and a financial crisis all the more violent for being belated.

Indeed, it happens quite as often that a contraction of credit, spread over several years, is marked by a series of crises in different parts of the world throughout its progress as that a single collapse of values occurs, as in 1825, 1857, or 1907, all over the world at the same time.

CHAPTER X.

FINANCIAL CRISES (Continued).

A CRISIS may be regarded as a struggle to maintain the standard of value. It is indeed actually caused by a general fall of prices, which is merely another name for a *rise* in the value of the monetary unit. It being customary to measure all values in terms of the monetary unit, this is called a fall in the value of commodities, but of course the utility of the commodities is not diminished, and it is theoretically more rational to say that the value of the monetary unit has risen. And this is so, even where the monetary unit is a fixed quantity of a commodity, such as gold, for gold, like lead or rubber, or tram fares, may rise and fall in relation to other commodities. The true significance of a crisis is therefore this—that when the monetary unit has been allowed to depreciate it can only be restored at the cost of increasing the burden of all debts, and that, if this is done too suddenly, the debts outweigh the assets of the debtors and cause a multitude of failures. If it be assumed that the gold standard is to be maintained at all costs, what measures ought to be taken to prevent a crisis, or, if that be impossible, to mitigate it? Clearly what is wanted is to save all those who are really solvent from being made bankrupt through the purely temporary difficulty of raising funds by borrowing or selling. The bankruptcies are caused by the fall in values, but the fall in values is intensified by the forced sales of those who are threatened with bankruptcy. If all the businesses concerned could be divided once for all into those which are hopelessly insolvent and must be allowed to fail, and those which can be saved, and if the latter were enabled to borrow, there would be no crisis! Forced sales would be useless for the one class and unnecessary for the other,

This division into the sheep and the goats may be impossible. What is to be the test of solvency? Are assets to be calculated at "normal" values when they are for the moment unsaleable at those values or anything like them? If the crisis supervenes on a period of several years of expanding credit and inflated values, how far back is it necessary to go to find "normal" values? If an underwriter is loaded up with securities which cannot be realised in existing market conditions, who is to estimate the probability that those securities will yield a regular dividend in future? In practice the man whose solvency depends upon speculative assets cannot borrow. He must fend for himself, and must find purchasers if he can, either at home or abroad.

And the difficulties are aggravated by the general tendency to distrust bills of exchange, which are based on the *combined* credit of several parties. If there are many failures among the merchants and others who are financed by means of bills, then the banks and other financial houses whose names appear on the bills as acceptors or discounters may be overwhelmed with claims from the holders of the bills. The ordinary banks are unwilling to increase their commitments, for any one of them that is more liberal in its advances than its neighbours may have to meet an adverse balance at the clearing-house. The function of making advances to solvent borrowers devolves on the central bank, and the problem to be solved is not an easy one. In the first place, no limitation ought to be maintained upon the issues of paper money; if legal limitations exist, they ought to be suspended. The crisis probably originated in a dearth of legal tender money, necessitating a contraction of credit. The failures and forced sales will do quite enough to depress prices and raise the value of the monetary unit.

The central bank ought to make advances on any clearly good security which any borrower may offer. It ought not to hesitate merely because the total amount of its advances appears excessive. To refuse a loan is probably to compel a sale, and every sale tends to depress prices in what is already a panic market. The pledging of a good security

for a loan avoids the necessity for inquiring too closely into the solvency of the borrower. But though advances should be made without limit so long as good security is forthcoming, they should only be made at a very high rate of interest. This prevents traders from borrowing more than they really need; if advances were granted too easily, the crisis might be surmounted only at the cost of starting a new credit expansion, resulting perhaps in a complete abandonment of the gold standard.

This is the generally recognised method of dealing with a crisis, evolved from the varied experience of the nineteenth century. The conditions may be such, however, as to make it ineffective. More particularly there are two weak points in it. The insolvency may be so widespread, that advances limited to good security may do little or nothing to save the situation; or the credit inflation may be so excessive that the crisis itself is insufficient to restore the gold value of the monetary unit. For the former, there may of course be no remedy. The general insolvency may be due not only to the fall in world prices, but to a universal imprudent speculation which has really wasted the country's wealth. No financial ingenuity can altogether avert the consequences. To sustain the solvency of traders who have thus betrayed the economic interests of their country, is like keeping an incompetent general in his command. But the difficulty may be due not so much to imprudence as to the poverty or elementary economic organisation of the country. It may be that traders have no good securities to pledge, not because they have been tying up their capital in wild speculations, but because they are not rich enough to take money out of their business in quiet times for the purpose of building up a reserve. In such cases the central bank or the Government may make advances on the security of the produce of the country, or the Government may even buy up the produce at a fixed low price, sufficient to rescue the holders from extreme embarrassment, but not so high as to risk involving the Government in heavy loss. A purchase operation, however, is dangerous. Loans can be made at high rates of interest, which will lead the borrowers

to repay them at the earliest opportunity. Put the vendors with money to spend, whether they are debtors or not.

In the case where the credit expansion is too great to be counteracted by the effects of the crisis, the central bank will find that the demand for gold for export continues. It cannot go on granting advances freely without endangering its gold reserves, and it may be that no raising of the rate of interest will be sufficient to defend the reserve. It is faced with the choice between a restriction of advances and a suspension of gold payments. A restriction of advances cannot but mean more bankruptcies. The very purpose of it is to raise the value of the monetary unit still higher, to make the burden of indebtedness still greater, or, in the more familiar language of the balance sheet, to depreciate the value of assets still further. The suspension of gold payments may well be the lesser evil.

And, it may be asked, what is there so very terrible about a suspension of gold payments? A complete abandonment of the generally recognised standard of value of the commercial world would obviously be very undesirable, but presumably it need only be a temporary measure. A contraction of credit, milder and more prolonged than that which would precipitate a crisis, might restore the standard after a year or two. Traders would rather suffer the inconvenience and uncertainty of variable foreign exchanges for a time than face the ordeal of a restriction of credit drastic enough to restore the standard immediately. For many countries this is true, and they do in fact take refuge from the stress of a crisis in a more or less prolonged régime of inconvertible paper. But the desirability of suspending gold payments depends on circumstances, and for some countries it has grave disadvantages. This is especially so for one which takes a large part in financing international trade.

The business of a financial centre includes two functions, accepting and discounting. The accepting business constitutes the centre an international clearing-house; that is to say, international obligations are settled in its currency. The discounting business constitutes it an international money.

lender. It is the former class of business that specially depends upon confidence in the solvency of the financiers and the soundness of the currency at the centre. The discounting business depends rather on the sufficiency of its resources, whether these resources consist of permanently invested capital or of bank deposits. But the bank deposits themselves will be partly composed of the credit balances of international traders who are accustomed to settle at the financial centre, and these credit balances would be withdrawn if the centre ceased to be a convenient place of settlement.

It was explained in Chapter VII. that when the whole of the foreign trade between two countries is financed by bills upon one of them, the assets of the exchange banks which do business between them will be composed predominantly of bills on this one, and that, in the event of a monetary stringency in the other, it is essential that they should be able to convert their assets in the former into gold which can be packed up and sent away to discharge their liabilities in the latter. If at the critical moment they cannot get the gold, the system breaks down, and caution impels the exchange banks to diminish their holdings of bills on the financial centre. The extent to which they can do this will depend on there being suitable acceptors to be found in other places. If there are, and if a preference is given to bills drawn upon them, as being payable in a more trustworthy currency, traders will tend to desert the old centre. Probably this cannot be done in a hurry. The accepting business depends not only on the solvency and reputation of the acceptor but on the acceptor's knowledge of his clients' business. Indeed the 'first condition is really bound up with the second, for the acceptor's solvency depends on the solvency of those for whom he pledges his credit. The business connection of a great accepting centre cannot be displaced in a day. Nor can the discounting business be easily transferred. It represents a huge investment of capital. The traders financed by it are indebted to the holders of the bills, and, even if they do draw on a different centre, they will probably have to have recourse to the same discounters, who, like the acceptors, know their affairs. If new discounters

appear at other centres, credit will be extended at the new centres and contracted at the old, so that the exchanges will turn in favour of the latter ; and this tendency would be only partly offset by the transference of traders' balances.

Thus the only easy and rapid way by which the transference of business can be effected is by the substitution of bills on the new centres for bills on the old in the assets of the exchange banks. In this process there is no movement of capital at all. The same trader borrows from the same bank as before ; only the debt is repayable at a different place and in a different currency.

The upshot is that a loss of confidence in the stability of the currency may drive away some of the business of a financial centre almost immediately, and may gradually undermine its position altogether. The process will be delayed, however, and may be largely prevented by the business connection of the accepting and discounting houses, and by the good credit of the former and the large investment of capital in the latter. But business goodwill is vulnerable and no country has a monopoly of investible capital. Once the world's confidence in the currency of a financial centre is forfeited its tenure becomes very precarious. Thus the almost superstitious loyalty of the London money market to the gold standard may be right and wise, and yet the comparative indifference to the maintainence of gold payments in some foreign countries, which have never played the part of financial centres, is not necessarily the reverse.

When it comes to coping with an external crisis, the same choice presents itself between a fall in values, which may be disastrous, and a suspension of gold payments, which means, temporarily at any rate, a departure from the gold standard. But in this case there is a chance of avoiding a crisis altogether. If a premium is charged on gold, the extent of the contraction of credit lies entirely within the discretion of the central bank. It might make no contraction at all, and might charge so high a premium on gold that practically none would be withdrawn. But this would be to put the premium on gold and consequently the premium on foreign exchange at a maximum.

It would be more judicious to take a middle course, contracting credit gradually and letting a certain amount of gold go. It is sometimes contended that a small premium on gold—say, 1 per cent.—is an adequate substitute for a large increase in the bank rate. This view is based on the assumption that the high bank rate only brings in gold by attracting the foreign lender. The direct return to the foreign lender can indeed be counteracted by a moderate premium. But the really important consequences of the high bank rate are to be found in the pressure put upon merchants to sell, and in the contraction of credit and consequent depression of prices, and these may be the equivalent of a large premium, perhaps 10 per cent, or more.

However, even a small premium helps to avoid the extreme severity of the contraction of credit that would otherwise be necessary. It shelters traders from the full force of the storm of forced sales and tumbling prices which rages outside, though of course this benefit does not extend to those who owe sums in foreign countries. These latter must pay the premium on gold or on foreign exchange in order to discharge their debts.

If there is to be no gold premium, an external crisis necessitates an export of gold and a contraction of credit. The less the contraction of credit, the greater will be the export of gold. If more gold is asked for than can be spared, the contraction of credit must be intensified, and if it is too abrupt there will be a crisis. The multitude of alternatives and the variety of circumstances defy any attempt to formulate general rules. One thing, however, we may safely say. International co-operation will conduce to the better control of crises. The occurrence of a crisis in one country is a danger to all the others. All are interested to prevent it and once it has broken out, all are interested to keep its effects within bounds. Their mutual help may take several forms. The gold movements may be regulated so as to distribute the demand as equally as possible among the countries which have gold to spare. The Bank of France has never been obliged unconditionally to redeem its notes in gold (having always the option to pay in silver), but it has from time to time sent large sums to London

or New York to meet the demands of a crisis. In 1890 the threatened failure of Messrs. Baring Bros. filled London with consternation. The failure was staved off by a joint guarantee on the part of the London banks, and the resources of the money market were temporarily strengthened by the importation of £3,000,000 in gold from Paris. In 1907 gold was sent from twenty-six different countries through London to New York. In 1839 England, as the sequel of the continental crisis of 1838, was losing gold. A credit of £2,000,000 was created by the Paris bankers upon which the Bank of England could draw, and bills drawn on this credit took the place of gold. A credit of £900,000 was opened for the same purpose at Hamburg.

A crisis produces a sudden inequality between the level of prices in the centre of crisis and the level of prices elsewhere. To restore equilibrium the one level must be raised and the other must be lowered. If credit has been unduly expanded prices cannot remain permanently at the higher level, but it is to the interest of everybody that the general fall of prices should be as moderate and gradual as possible. For the moment, at any rate, they will wish by all means to raise prices at the crisis centre. The sending of gold helps to do this, since it increases the stock of purchasing power. Gold is sent because it is the means of acquiring credits, but unless the influx of gold is accompanied by an extension of other banking assets, such as advances and discounts, the additional purchasing power will be limited to the bare equivalent of the gold itself. Now one of the chief difficulties in a crisis is to find solvent borrowers. In ordinary times the loans and discounts granted by the banks are limited only by the need for maintaining a due proportion between cash reserves and the other items of the balance sheet. At a time of crisis a different limit comes into operation. The central bank, perhaps, is willing to issue unlimited quantities of cash in the form of legal tender paper, and the other banks are prepared to make advances in due proportion to these fresh supplies of paper if only they can find suitable borrowers. But those who want to borrow are unable to offer good security, and, if they had to disclose their

financial position on the basis of panic prices, would probably show a deficit. Lending being impossible, bank credits cannot be created, and paper money cannot be put into circulation. The shortage of purchasing power cannot be relieved except by sales of goods and securities on the part of the embarrassed traders. Hence the forced sales and the influx of gold. The influx of gold is not due, as is sometimes maintained, to a distrust of any other medium of payment. A debtor can discharge his debt in legal tender paper money whether it be distrusted or no, and cheques are usually quite freely accepted in the midst of a crisis, except when drawn on a bank which is known to be shaky. Gold is imported because the interruption of credit operations has stopped the supply of paper money and bank credits. It is therefore the only means of increasing the supply of purchasing power and so of reducing again the artificially raised value of the monetary unit, and other countries ought, in the interests of the commercial world, to send whatever gold they can to the crisis centre. When the storm is over, and traders have either weathered it or foundered, lending can recommence on the normal footing, the supply of credit money will be reconstituted, and the greater part of the gold will soon be sent abroad again. The demand for gold in a crisis is sometimes artificially intensified by restrictions on the issue of paper. Even where there is no limit on the amount of paper money that may be legally issued, or where the legal limit is temporarily removed, paper money may still be an inadequate medium of exchange, merely because the lowest denominations of notes are too high for ordinary use, especially for the payment of wages. This has often been an important factor in English crises. The drain of guineas, which led to the suspension of specie payments in 1797, was partly due to the need of coin for internal circulation, there being no notes below £5. At the time of the crisis of 1825 Bank of England notes below that limit had been again withdrawn, though they were not prohibited by law. In the midst of the crisis a forgotten chest of unissued one pound notes was discovered, and they were sent out to the provinces, where they contributed materially to relieve the

strain. In the financial crises of the nineteenth century after the Bank Charter Act of 1844 the use of small notes in lieu of gold would, of course, have done nothing to avert the suspension of the Act. But at the outbreak of war in 1914 the need for small notes was acutely felt, and they had to be improvised at very short notice to meet the sudden demand for additional currency for internal circulation, which arose out of the mobilisation measures and the general dislocation of credit.

Before leaving the subject of crises, it will be worth while to consider the position at a time of crisis of a country with a gold exchange standard, or with a currency system based in part on foreign bills or assets abroad. In case of an external crisis there will be a sudden rush to remit money to the crisis centre. But this demand for remittances will be met by the sale of bills on foreign centres, and the demand for gold will be transferred thereby to those centres. It is plausibly contended that countries which adopt a gold exchange standard owe it to their neighbours to keep a part at any rate of their foreign assets in the form of actual gold "earmarked". When the crisis comes and the foreign assets are drawn on, this earmarked gold can be unpacked from the vaults where it is kept, and paid away, thus adding to the world's stock of gold in a way that payment from a bank credit does not. But, of course, in so far as gold is substituted for bills or securities, one of the great advantages of the exchange standard is lost, since the gold yields no interest. It may be more convenient to have the gold in a great financial centre, where it can be used at a moment's notice to regulate the exchanges, than in a country where it is not used for internal circulation, and where, therefore, it can serve no purpose except by being exported. Even the Bank of England has recently discovered that it may just as well keep a part of its gold reserve abroad. But this is not the full development of the exchange standard. And, except in the case of dependencies, like India, the countries which have an exchange standard, or which base their currency systems in part on assets held abroad, usually prefer to keep their gold at home.

It is not of the essence of the system that a smaller pro-

portion of gold should be kept than in the case of a currency based exclusively on direct convertibility into coin. The foreign securities and bills may be regarded as taking the place not of gold but of home securities. But even where all or part of the gold is replaced by foreign assets it need by no means be admitted that there is any real failure of duty to the gold-using world. It is quite true that a country with a currency so organised has no gold to offer to a neighbour distressed by a crisis. But it is equally true that when it in turn suffers from an internal crisis, it will ask for no gold from abroad. When its traders acquire credits abroad by means of forced sales of goods and securities, the central bank or other currency authority will purchase these credits with new issues of paper money. The traders in question, those whose credit is tainted and whose embarrassments are the cause of the crisis, will thus be easily and quickly supplied with the price of whatever they have to sell in their own legal tender money and will not have to import any gold at all. I cannot quote any concrete case where this method of dealing with a crisis has been actually pursued.¹ The gold exchange standard is of recent adoption, and the countries in which it has been given its completest form have not suffered from internal crises since it came into being. But the logical consequences of the system are clear enough, and it is quite fair to claim that it enables the country which adopts it to dispense with imports of gold in a crisis, as at all other times. In fact it can stand aside from the world's gold market altogether, adjusting its currency not to a gold standard as such, but to the standard which its neighbours use and which happens for the time being to be based on gold.

Nevertheless, though all this be granted, it is still true that a country can better contribute to the monetary stability of the world by keeping a part of its resources in gold than by pushing the gold exchange standard to the logical extreme.

¹ During the American crisis of 1873 the Secretary of the Treasury was urged to use his surplus funds to buy exchange on Europe, but he declined to do so. The credits opened in Paris and Hamburg in favour of the Bank of England in 1839 are somewhat similar in principle.

The best safeguard against excessive credit expansions and the inevitable consequences, excessive contractions and financial crises, is that there should be the greatest possible accumulation of gold in central reserves in the early stages of expansion. Every country whose legal or administrative currency arrangements ensure the accumulation of a relatively large gold reserve as a condition of a given expansion of credit helps to keep the contraction within bounds. A country with a gold exchange standard may do its share if it amasses a gold reserve when its currency expands and releases it when its currency contracts, while if it eschews the use of gold altogether it remains purely passive.

A crisis is not a necessary or universal accompaniment of a credit contraction. Nearly every world-wide credit contraction produces a crisis somewhere, but there are not usually more than two or three separate centres of crisis and sometimes not more than one. There is no reason in the nature of things why the process of contraction should not be completed without a crisis breaking out anywhere.

CHAPTER XI.

MONEY AND COINAGE.

UP to this point our attention has been turned to those problems which proceed from the inherent nature of a credit system. We have found that there are disorders which threaten the stability of such a system from within, even though it be assailed by no disturbances from without. In Chapter XIII. we shall pass to the consideration of these extraneous disturbances, especially of those attributable to war, and we shall find that they play a very large part in our subject.

In the present chapter we shall draw some general conclusions as to the nature of money, and as a preliminary a short recapitulation will be convenient.

At the outset we adopted a purely artificial hypothesis, the existence of an economic community which used credit as a means of payment, but had no money. We assumed that there might be a "money of account" for the measurement of debts and therefore of prices, and we found that, apart from the obvious disadvantage of having no single legal medium for the discharge of debts, the chief defect of a credit system carried on without money was its instability. Credit, we showed, has an inherent tendency either to expand or to contract indefinitely, but especially to expand, and in doing so to alter the unit of value beyond any assignable limit. The use of money supplies the means of discharging debts, but it also plays the very important part of stabilising the unit of value.

In Chapter II. we passed to the theory of a credit system based on metallic money. Metallic money, under a free coinage system, provides an independent standard of value. But the supply of money cannot be arbitrarily increased. The danger of an indefinite depreciation of the unit of value is replaced by that of a denudation of the reserves of money. Owing to

the activity of trade during a credit expansion and the accumulation of unexecuted orders, which will require to be financed when they are undertaken, there arise *latent* demands for credit of which the banks have no cognisance. At the same time the effect of the credit already created in occasioning a drain of money into circulation is gradual, and a relatively long interval must elapse before its full extent is felt. There are therefore latent demands for cash as well as latent demands for credit, and both will cause embarrassment to the banks when they mature.

This led us naturally to the currency system in which the supply of money can be increased or diminished at discretion, in other words to paper money. Paper money has no intrinsic value, and the first problem was to seek the law by which its value is determined. This we found in the quantity theory. The quantity of purchasing power or command of wealth held by people in reserve is determined by their economic circumstances. The aggregate of these reserves of purchasing power at any time is equal to the aggregate of bank credits and money in the hands of the people at that time. The former is an aggregate of command of *wealth*, the latter is an aggregate of *monetary units*, and their equality determines the value of the monetary unit in wealth, or the prices of the various forms of wealth in monetary units. The quantity theory so enunciated merely states the relation between the number of the monetary units in circulation and the value of the unit, when all other economic circumstances are supposed given; in itself it says nothing as to what happens when the number of units in circulation is changing, and if such a change is in progress the existence of a state of change must be included among the economic data assumed.

An acceleration or retardation in the creation of credit itself causes a rise or fall in prices, or in other words a fall or rise in the value of the monetary unit, quite apart from any change in the quantity of purchasing power in circulation, which may accompany or follow it. And we showed that the less such a credit movement affects balances, the more will it affect prices. That part of the credit created which, on pass-

ing into the hands of the people, is spent, affects prices, while for the time being that which is left in balance, does not.

The banks undertake to transform credit into money and money into credit at the will of their customers. Consequently with a given supply of credit the circulation of money is determined by the convenience of the people; it can only be controlled through the control of credit, by which their business and their incomes can be affected. The problem of the regulation of currency is therefore resolved into that of the regulation of credit.

Before dealing with the systems by which paper currencies are regulated through credit, we found it necessary to discuss the foreign exchanges. An undue expansion of credit in comparison with foreign countries makes the exchanges unfavourable and causes an efflux of gold; an undue contraction makes them favourable and causes an influx of gold. These effects being felt in the first stages of the credit movement give an earlier warning than the internal drain of money into circulation.

By basing the control of credit on the foreign exchanges, credit movements cannot be avoided altogether but can be kept in harmony with credit movements abroad. But this system does not prevent world-wide credit movements. And the same dangers that were disclosed in Chapter II.—that is to say, the growth of latent demands for credit and cash—will arise in the case of world-wide expansions. The form which the demand for cash takes depends on the currency system of each country. In some it can only be met, in whole or in part, by gold; in others it can be met by paper money, which according to law must be wholly or partly covered by gold. As the demand for cash grows, the surplus reserves of gold are gradually used up, till at last they reach the point at which in one or more countries there is no longer any certainty that the legal limit on the note issue can be observed, or perhaps even that the convertibility of the notes into gold can be maintained. There follows a contraction of credit in these countries, which inevitably spreads to the others. But the drain of cash, the consequence of the previous credit expansion, continues, and

the latent demands for credit, arising out of past commitments and unexecuted orders, continue to press upon the banks for further accommodation. In those countries where the pressure is greatest, and the measures taken to contract credit correspondingly violent, there may ensue a financial crisis.

A financial crisis, the consequence of a general depreciation of values, and of the embarrassment of people who are carrying the depreciated commodities and securities with borrowed money, is important in two ways. First, in the centre of crisis itself it is the penalty of an imprudent use of credit, and it demands special measures to save solvent traders from suffering failure through the disorganisation of credit and the panic fall in values. Secondly, the occurrence of the crisis subjects other countries to an extreme strain through the sudden and violent movement of the exchanges in favour of the crisis centre.

In the management of a currency system the danger point is always to be found somewhere in the progress of the credit contraction. The risk of an indefinite depreciation of the monetary unit, such as would occur in a system of credit unsupported by money, is guarded against so long as the paper money is convertible into gold or kept in touch with a gold standard. But a condition of the preservation of a gold standard is that a credit expansion must sooner or later be followed by a credit contraction. Too abrupt a credit contraction produces a crisis, yet if the demand for legal tender money persists, either the contraction must be abrupt or the prescribed limits on the issue of paper money must be exceeded. And if these limits are exceeded the process may go further, the gold reserves may be exhausted and gold payments may have to be suspended. It may therefore be that a crisis is the only alternative to a temporary abandonment of the gold standard. The prudent country will look forward to this danger, and will endeavour to restrain its share in the general credit expansion. Caution during the expansion period will of itself lead to the accumulation of gold resources, and these gold resources can be used should a crisis occur in any other

country during the inevitable credit contraction. For some disparity between the level of values in two countries can be maintained on condition that that with the higher scale of values is able to continue exporting gold to that with the lower, so that a country which has gold to spare can defend itself for a time against the violent fall of values which a crisis involves.

Hitherto we have assumed the standard of value to be gold. Even when paper money falls away from this standard, we have supposed that the standard is still kept in sight, and that endeavours will be made to regain it. These assumptions correspond closely enough with actual practice (at any rate under normal peace conditions), but our investigation of the quantity theory in Chapter III. was sufficient to show that they fall short of complete theoretical generality.

The problem of stabilising the monetary unit, on which the value of debts depends, can be solved by defining the unit in terms of a commodity, such as gold or silver. But that is not necessarily the only solution. Nor is it a perfect solution. We have shown that in spite of its union with gold the monetary unit will vary, and the world value of gold will vary with it. The industrial demand for gold is a mere trifle compared to the vast stock used throughout the world as currency.

In the event of a credit expansion, the increase in the quantity of purchasing power lowers the value of the monetary unit. The monetary unit is a gold unit, and therefore gold is cheapened, but this is not due to any diminution in the demand for purposes of currency. On the contrary, there is an *increased* demand for gold ; the demand for gold is derivative from the supply of credit, and when credit expands a greater amount of gold passes into circulation. The banks, in fact, are under an obligation to supply gold at a fixed price. The fall in the value of the monetary unit makes this price, though in appearance fixed, in reality lower. A lowering of the price of gold means an increased demand, though, as we have seen, the increased demand for currency purposes only makes itself felt

very gradually. In order to equalise supply and demand, the supply has to be supplemented from the reserves of the banks, or else replaced in part by an increase in the paper circulation.

It is sometimes maintained not merely that gold is a commodity, but that *money* is a commodity. In virtue of the quantity theory, the greater the supply of money the less will be its value in other commodities; what is this, it is asked, but the law of supply and demand? The money in circulation represents in the aggregate the amount of purchasing power that people choose to keep in hand in the form of legal tender. They keep it in this form for certain definite purposes; that is to say, on account of its utility. The rich man keeps his pocket money, the poor man keeps his stock of cash, the shopkeeper keeps his till money, the banker keeps his reserves. Each is sacrificing the advantages of spending or investing this purchasing power for the convenience of having ready money in hand. This demand for ready money is analogous to the demand for a commodity; cash in hand is part of the capital resources of the individual.

But it is a mistake to push this analogy too far. Indeed when applied to paper money it is palpably no more than an analogy. Even though paper money behaves like a commodity in following the law of supply and demand, it obviously differs from other commodities in having no appreciable cost of production. It resembles other entitling documents, rather than commodities. A theatre ticket derives its value from the right which it confers to a seat in the theatre; a legal tender note derives its value from the right which it confers of discharging a debt. Just as the value of theatre tickets is derived from the value of theatrical performances, so the value of paper money is derived from the value of debts. We have seen how the value of the monetary unit is determined by the quantity of credits (debts) put into circulation by the banks, and how the demand for legal tender money arises from the unsuitability of bank credits as a medium of payment in certain classes of transactions. The interchangeability of bank-credits and legal tender money at the option of the bank's creditors

makes the separation of the total stock of purchasing power into credit and money an artificial one. More properly, the quantity theory expresses a relation between the total command of wealth held by people in reserve and the number of units of purchasing power, credit and money together, by which that command of wealth is expressed. It is not money but purchasing power in general that must be the "commodity".

The analogy between purchasing power and a commodity rests practically on this one characteristic, that the greater the number of units of purchasing power the less is the value of the unit. In the case of a commodity the law of supply and demand tells us that the price must tend to be that at which the production and consumption over any period of time are equal. The stock or visible supply may be large or small, and the price may be lowered till the surplus is absorbed or raised till the deficiency is made up, but primarily it is not the stock but the output that is in question. The quantity theory of money and credit relates the value of the monetary unit to the stock and not to the output of purchasing power. Indeed, it is not easy to say what is the "output" of purchasing power. Credit and money are not produced and consumed like commodities. Credit is produced by banks, and at first sight one is tempted to suppose that the analogue of the production of the commodity is the creation of credit by a bank. The mere reshuffling of credits when a consignment of goods passes from one dealer to another clearly should not be counted, any more than the goods themselves should be counted in the aggregate of production every time they change hands. We have already (chap. i., p. 7 and chap. iii., p. 40) had occasion to draw the distinction between the creation of "new" credit for new production and the mere substitution of a loan to one dealer for a loan to another. But this distinction, based as it is on the *purpose* for which credits are created, however valuable for unravelling tendencies, will not stand logical criticism. For the trader borrows the net sum required, after allowing for the effects of all his forthcoming transactions, some of which may be in the nature of new

production and others in the nature of dealing. For the purposes of our analogy there ought to be a correspondence between the output of purchasing power and the supply coming into the market. Now in the market which exchanges purchasing power for commodities and services the supply of purchasing power is simply the consumers' outlay. Here again it is clear that transactions in the nature of *dealings* should be disregarded; in other words, that the supply should not include the traders' turn-over as well as the consumers' outlay. If the consumers' outlay is the supply of purchasing power, then the output of purchasing power is the consumers' income, and the difference between the two is the change in the stock or unspent margin. Up to a point the parallel is good. But what is to correspond to consumption? The purchasing power expended by the consumer may be thereupon applied to the extinction of a banker's loan; it comes to an end and can be said to have been "consumed". But, on the other hand, instead of coming to an end, it may go on circulating. The dealer who receives it may pay it away in making a further purchase. When money or credit goes on circulating from hand to hand, is it "produced" every time it is earned and "consumed" every time it is spent?

The greater the number of monetary units in the consumers' outlay, the lower the value of the unit in terms of wealth. This corresponds well to the law of supply and demand. But then the lower the value of the monetary unit in terms of wealth, the greater will be the number of units in the consumers' income and therefore (subject to any variation in the unspent margin) in the consumers' outlay. In other words, in exactly the same degree in which an enlargement of supply lowers price, a fall of price stimulates the supply. Here the analogy with the law of supply and demand completely fails, and its failure is one of the causes of the instability of credit. In order to counteract this instability the banks have to have recourse to some other means of controlling the market for credit than through the purchasing power of the monetary unit; they have to make use of the rate of interest. The operation of the rate of interest affords another example

of the difference between purchasing power on the one hand and commodities on the other. A rise in the rate discourages the holding of stocks and cheapens commodities. It is not merely that the value of commodities in money is diminished, but that the supply of commodities in the market is momentarily increased by the dispersion of stocks. At the same time the rise in the rate of interest retards the creation of credit and diminishes the consumers' income, and increases in proportion the value of the monetary unit.

The theory that money behaves like a commodity has the attractiveness of a paradox which completes a generalisation. But it melts away under analysis except as applied to metallic money. Gold is undeniably a commodity. But gold itself, so long as it is being used as money, is subject to all the laws which govern the value of money. A gold coin is itself a ticket; its character of legal tender is derived not merely from the material of which it is made, but from the fact that it has been through the Government mint, and has been issued for the express purpose of being the means of discharging debts. It is stamped on gold in preference to being printed on water-marked paper, because this arrangement facilitates the maintenance of a standard of value.

So long as the ticket for discharging debts can be transformed at a negligible cost into the raw material of industry, the unit represented by that ticket cannot depreciate below the value of the material which it contains. But for all that, so long as the coin is *not* melted, it remains a ticket. Its quality of discharging a debt is attached to it conventionally, whether by law or custom, just as is the quality of admitting to a performance to the theatre ticket.

And though the metal of which the coin is composed is a commodity, it is only under a system of free coinage that the value of the commodity regulates the value of the coin. It is true that the value of the coin cannot fall much *below* the value of the metal, since it is almost impossible to enforce any prohibition of melting. But the value of the coin may be raised indefinitely *above* the value of the metal by merely restricting the amount coined; for by the quantity theory the

fewer the coins in circulation the greater their value. This is what has actually been put in practice in those countries, like India, which have a silver coinage with a fixed gold value. The rupee is a mere ticket or token. The same is true indeed of all silver coins in gold-standard countries, whether they are unlimited legal tender like the five franc piece in France, or limited like the subsidiary silver which is everywhere used as small change.

In the case of inconveritible paper money it is easy to see that its value arises from its power of discharging debts. Debts have value. As the purchase of commodities and services creates a debt, and one debt can be exchanged or set off against another, the ownership of a debt confers on the creditor that command over commodities in general, which we call purchasing power. The possessor of any quantity, large or small, of wealth, prefers to retain a portion of it in an *undifferentiated* form, an option, which he can exercise as he pleases when circumstances show which particular kind of wealth will meet his needs. Hence there is a demand for credit or purchasing power *as such*, which is satisfied by the existence of the unspent margin. By this demand the value of debts is determined, and the value of paper money is derived from its interchangeability with debts. Paper money can receive its value from no other source.

But, though less obvious, it is equally true that *gold itself* derives much of its value from its convertibility into credit. Not only does the mint give a piece of gold the same legal tender property as belongs to paper money, but a great part of the demand for uncoined gold bullion proceeds from its use as a symbol of purchasing power. Because gold can everywhere be transformed into credit, it is stacked to the value of scores or hundreds of millions of pounds in the vaults of each of the great central banks of the world, and hundreds of millions circulate in the form of coin. How great a part is played in the market for the precious metals by the currency demand is clearly illustrated by the effect on the value of silver of its gradual demonetisation after 1873, as well as by the fall in the world value of gold in comparison with other

commodities, since so much of the metal has been displaced by paper-money during the war.¹

In short, gold is a standard only a degree less artificial than paper money, and artificial for the same reason—that its value is in part a consequence of its legal or conventional characteristic of discharging debts. But it differs from paper in two respects, in that it has *some* value otherwise than as currency, and that its value as currency is recognised in the world market without regard to national frontiers.

Up to this point we have hardly touched on the problems of *coinage*, as distinct from those of money. Under the system of free coinage the power of legally discharging a debt belongs not to gold in itself, but to gold *coin*. Credits and legal tender notes are alike payable in coin, and the maintenance of the standard depends, or may depend, on the perfection of the coin. As soon as the monetary unit begins to depreciate below the gold value of the coin, it becomes profitable to melt or export the coin in circulation, and to convert credit and paper into coin for these purposes. If the coin is perfect and of full weight, it behaves exactly as if it were so much bullion. The problems begin when some of the coins are, from wear, "clipping," inaccurate manufacture, or deliberate debasement, below the prescribed standard of weight and fineness. In that case it is profitable to melt or export those coins the metallic value of which is greater than their current value in terms of the monetary unit, but not those whose metallic value is less.

This is Gresham's law. The worse money drives out the better. It takes effect only when there is a discrepancy between the value of the coin as a commodity and its value as a ticket or token. Its value as a token is fixed by the quantity theory. With changes in the state of trade this value may change. If the coin is perfect, then, when the monetary unit tends to become depreciated, the coin begins to be melted and exported, and this process cannot stop until either the value of the monetary unit is restored (by a contraction of credit or any other means) or the entire stock of currency is exhausted.

¹ See below, chapt. xxi., p. 372.

If some of the coins are imperfect, the better coins will be melted or exported, until none are left of which the metal contents are worth more than their value as monetary units. In the former case the monetary unit will be saved from depreciation so long as there is any coin to be sent away; in the latter it will be depreciated to the level of the least imperfect coins left in circulation.

When, under a system of bimetallism, as it is called, the coinage consists of two different metals, gold and silver, both of which are coined freely from any bullion brought to the mint by the public, the same principle is found to work. For the purposes of coinage the monetary unit must represent a definite quantity of either metal. The consequence is that the mint practically undertakes to buy gold and silver in unlimited quantities, and to pay for them at fixed prices in the money of account. This presupposes that the relative values of gold and silver will correspond with their relative mint prices. For example, in France under the bimetallic régime from 1803 to 1873 a kilogramme of silver, nine-tenths fine, was coined into 200 francs, and a kilogramme of gold of the same fineness was coined into 3100 francs. Consequently the mint prices were in the proportion of 3100 to 200, or 15½ to 1. But if there is an increase in the supply of one of the metals in comparison with the other, so that, but for the bimetallic system of coinage, the more plentiful would tend to be cheapened, the effect is that an increased quantity of the more plentiful metal is brought to be coined. The increase in the circulating medium causes, in accordance with the quantity theory, a depreciation of the monetary unit and a general rise of prices. This general rise of prices would, but for the bimetallic system, affect the less plentiful metal as much as other commodities, but as soon as the price of this metal as bullion rises appreciably above its price as coin the coins begin to be melted down or exported. In fact, the mint price over-values the more plentiful metal and under-values the other, and the under-valued metal is driven out of circulation in exactly the same way as good coins are driven out by those which are worn or debased. This is what happened in

France and the other bimetallist countries of Europe in the nineteenth century. After the gold discoveries of 1849 and 1850 gold began to be over-plentiful and to displace silver from circulation, until at last there was such a dearth of small change that it became necessary to coin a limited supply of subsidiary coins of inferior fineness, which it would not be profitable to melt or to export. Hardly was this reform made, when the supply of silver in turn became unduly plentiful and the supply of gold insufficient. In 1873 the free coinage of silver had to be suspended, and bimetallism was at an end.

The concurrent use of coin and paper money affords another illustration. So long as any appreciable amount of coin remains in circulation, coin and paper, being equally available for the payment of debts, bear the same value in terms of the money of account. But if the amount of paper money is increased, the value of the monetary unit falls and the coin, as a token, becomes undervalued in comparison with the market value of the metal it contains. Coins are then melted or exported (or hoarded in the hope of a further rise in their value) until the value of the monetary unit is sufficiently raised to counteract this tendency. Thus here, too, in the end the additional paper money, after a certain amount of adjustment, will have driven an equivalent amount of metallic money out of circulation.

But though there have been countless instances of the operation of Gresham's law all over the world, it must not be supposed that this law is true without exception or qualification. It can only operate so long as the nominal value of the coins or notes in circulation is generally accepted; that is to say, so long as they are actually used to discharge debts on the basis of that nominal value. If a debtor holds some coins which are and others which are not worth more as metal than as money, his creditor cannot compel him to pay the former. The debtor may stipulate that the more valuable coins be accepted at something above their nominal value. Usually the inconvenience of making payments in a medium the money value of which varies with the market prevents this, but that is not invariably the case. In England in the latter part of

the seventeenth century the gold coin issued from the mint was the guinea, which was intended to be worth twenty shillings of silver. This represented an under-valuation of gold as compared with its market price in England and abroad, and according to Gresham's law the guinea ought to have been driven out of circulation. But at that period the growing volume of trade made so bulky a medium of payment as silver intolerably inconvenient. The merchants and goldsmiths or bankers found gold indispensable for large payments. Instead of the twenty-shilling guinea being driven out of circulation its nominal value became a dead letter, and it regularly passed for 21s. 6d. or 22s.

This customary over-valuation of a coin which happens to be convenient for commerce, notwithstanding that legally it is under-valued, is not the only possible exception to Gresham's law. Money, whether coin or paper, which is legal tender may cease to pass at its face value, because in practice debtors do not wish or do not dare to take advantage of their legal right to pay with it. The French assignats, which were still the sole medium of payment when they circulated at from one-fifth to two-fifths of their nominal metallic value in 1794, fell to one-three-hundredth in 1796. It can hardly be supposed that in the latter year a debtor who valued his credit or his reputation for honesty would have tendered a bundle of notes to the value in the market of ten sous in payment of a debt of 150 livres.¹

Under the régime of the silver standard there was never any difficulty about the supply of subsidiary coinage; the small silver coins represented as small a unit of value as was ordinarily required for anything above the trifling transactions for which copper tokens were employed. Gold coins, however, are not usually issued below about fifty grains (the weight, for example, of a ten franc piece) and coins of twenty-five grains are about as small as can be conveniently handled. It was found that if gold and silver coins circulated concurrently, and if the silver became under-valued, inconvenience was caused

¹ Legal recognition of this situation was given by the Acts sealing down the debts contracted during the depreciation (see p. 251).

by the disappearance of the silver, because there was then a shortage of small change. In the eighteenth century in England this difficulty solved itself, for though all the best silver coins were exported or melted, those that remained eventually became so worn that it was not in any circumstances profitable to export them. For a century and more the same old coins, eventually so worn as to be nothing but plain metal discs, were the only subsidiary coins we had.¹ At last the Coinage Act of 1816, which definitely disestablished silver as a standard, making silver coins legal tender only for sums not exceeding 40s., introduced the system of subsidiary coins expressly designed to contain less fine silver than, at the prevalent ratio of silver to gold, was equivalent to their nominal value. The use of an over-valued silver subsidiary coinage has now become almost universal.

The system is, of course, incompatible with the free coinage of silver. The amount coined must be kept within the control of the Government. And the Government must regulate the amount coined according to the public demand. People will draw out from the banks just so much silver as they need and no more. If there is not enough to meet their needs the banks will feel the scarcity, and it is on the banks that the Government must rely to notify them of the demand. When the banks ask for more subsidiary coin, the Government buys so much silver bullion as is required, at the market price, coins it, and sells it to the banks at its face value. If it issues more than is required, the surplus will soon accumulate at the banks, and they will ask for less. If, nevertheless, the Government persists in forcing more and more silver into circulation, till the banks find that they have inconveniently large accumulations, the banks will eventually make a charge to every one who deposits silver; in other words, the silver coinage will be at a discount. Indeed, it may be advisable for the Government to guard against this by undertaking to buy back any redundant silver at its face value.

¹ They were supplemented during the Bank Restriction by Spanish dollars, which were stamped by the Bank of England and issued at a prescribed value.



Fundamentally, the issue of the standard money of full legal tender, whether it be metal or paper, is regulated in the same way as the issue of subsidiary silver. The customers of the banks are free to transform as much as they please of their credits into money. The banks determine their demands on the central bank for legal tender in accordance with the demands of their customers. The central bank issues paper, or pays out gold, as the case may be, in response to the demands of the banks. To control the demand for money, it is necessary to influence the individual from whom the demand ultimately proceeds. His need for money is incidental to his dealings in credit; he only needs it because money happens to be a more convenient medium for some of the transactions for which he has obtained advances of credit. That is why the control of money can only be effected through the control of credit.

From the point of view of the individual the demand for gold, silver, paper, or credit is determined simply by convenience. Up to a certain point the banks can manipulate the demand, by insisting on their right to pay their debts in whatever legal medium they choose, but if they run too much counter to the convenience or the prejudices of their customers, the medium of payment most in demand will go to a premium. The high market valuation of the guinea in England in the seventeenth century was one example of this. Another is to be found in the premium on bank money at Amsterdam and Hamburg in the seventeenth and eighteenth centuries; for at the great centres of international trade a miscellaneous assortment of coins of many nationalities and varying values would accumulate, dealings in which were intolerably troublesome in comparison with the simple and businesslike transfers that could be made in the books of the banks. Yet another instance is to be found in the premium which often prevails on bank notes at the Treaty Ports of China, though these notes have no legal tender character, and represent no value other than that of the silver into which they can be converted on demand at the issuing bank. But the inconvenience of silver for large payments is almost prohibitive,

and the preference of traders for the notes is reflected in the value at which they pass.

Gold has been selected as the standard of value as the result of the law of the survival of the fittest. For a long time silver held the field. Till the discovery of the New World, gold was too scarce and valuable to be a suitable medium of payment; thereafter, the supply of both being increased, silver became too plentiful and cheap. It dropped out of use in England in the eighteenth century and in the United States in the nineteenth, the result in both cases of an over-valuation of gold under a nominally bimetallic system. Under the French bimetallic system also gold began to displace silver after the gold discoveries of 1849 and 1850. In 1873, Germany adopted the gold standard, and thereupon almost all the rest of the world endeavoured to follow suit. The process was spread over a period of thirty years, and is even now incomplete, since China with one-fifth of the world's population retains the silver standard (not to mention the recent relapses to a paper standard in Europe under the stress of war).

This superiority of gold over silver in regard to convenience has two different aspects. Under the free coinage system the legal tender money which people carry in their pockets is made of coined metal. In the Middle Ages, when the world was poorer in material wealth and the purchasing power of silver was greater than it now is, the largest coin in use in England was at one time the penny of 22½ grains (about the size of the modern threepenny piece). When the scale of business transactions was such that that was the convenient coin, people were not likely to suffer from the bulk of silver that their business required them to keep in hand. But in the seventeenth century, when transactions reckoned in thousands of pounds had become common, and when credit facilities were still primitive, the unwieldiness of the silver became a serious inconvenience. Now-a-days the development of banking and the use of paper money have made the question of handiness for internal circulation relatively unimportant. The point at which the superior convenience of gold

is felt under modern conditions is in settling international balances.

For the purposes of international trade it is important that every foreign exchange should be kept as near as possible to a fixed par. The exchanges among countries which use the same metallic standard oscillate about the par represented by the metal values of their respective monetary units, and the maximum divergence from this par is limited by the specie points. But the difference between par and either specie point represents the cost of transporting the metal. The less bulky the metal in proportion to its value, the smaller will be the cost of transporting it, and the narrower therefore the limits within which the rate of exchange can vary. Of course in the transportation of gold and silver insurance counts for a large proportion of the total cost, and as insurance depends not on bulk but on value the cost of transportation does not by any means increase in proportion to the cost of handling. But for all that, the advantage on the side of gold is just great enough to be decisive.

Thus gold has become the international currency. And for this purpose no legal tender privilege has any virtue; the value of a gold coin away from its own country is no more and no less than that of an equal amount of gold bullion. For the measurement of large quantities of the precious metals weighing is a more convenient method than counting coins. Consequently the same currency system, which is so grotesquely cumbersome in its application to the internal trade of China, is quite practical and convenient in its application to international trade between the great commercial nations of the world. For in China the conception of a coin as legal tender is not recognised. Silver, the ordinary medium of large payments, passes by weight, though even there conventional values are very apt to attach to well-known coins, such is the inconvenience of weighing.

But though gold is the international currency, it must not be supposed that international debts are necessarily payable in gold. A debt in fact is payable in the currency of the place where it is due. The reason why gold is employed in inter-

national payments is that in every gold-using country credits can be bought at a fixed price for gold. Whoever possesses gold possesses the means of acquiring credits practically everywhere. But in order to *use* the gold as the means of payment he must transform it into credit or money ; he must sell it to a bank, or, alternatively, take it to the mint to be coined.

The mutual convertibility of gold and credit is the logical consequence of the free coinage of gold. The free coinage of gold makes gold coin and bullion practically interchangeable. But debts, and gold coin, the means of payment of debts, are equivalent. Consequently debts and gold bullion are equivalent.

Sometimes a percentage charge, called seignorage, is made for coinage. The man who brings a certain weight of bullion to be coined receives back a weight of coins less by this percentage. Under that system no bullion will be brought to be coined unless the value of the monetary unit (as determined by the quantity theory) is sufficient to pay for the bullion ; that is to say, the value of the unit must exceed the value of the bullion contents of the coin in which it is payable by the seignorage percentage. And the coin will not be exported or melted unless the value of the monetary unit falls below its actual bullion contents. This system therefore permits a wider range of variation to the monetary unit than the free coinage system. It is as if the gap between the import and export specie points were increased by the amount of the seignorage. A small seignorage, a fraction of 1 per cent., is a not uncommon feature of present-day coinage systems ; it logically implies an equivalent difference in the buying and selling prices of gold bullion at the banks. Large seignorage charges were formerly common, but are now a thing of the past. An exorbitant seignorage charge is essential to a profitable debasement of the coinage. If the debased coins are issued too freely the monetary unit is depreciated and the profit vanishes.

Even under the system of free gold coinage and convertible paper, the equivalence of the monetary unit to its nominal

value in gold is never anything but an approximation. The approximation may be made very close indeed, if the coinage is perfectly executed and efficiently regulated, and the arrangements for the payment of money for credit and credit for money are genuinely free. If a large part of the coinage is below weight, either from wear or from imperfect execution, or if obstacles are interposed to the conversion of credit into coin or bullion, there may be an appreciable discrepancy between the nominal and the actual value of the monetary unit in gold. It is a mistake to suppose that even the general circulation of an unimpaired gold coinage is a complete safeguard against this. Before even good gold coins begin to be melted down, the market price of bullion must *already* be high enough to make melting profitable. And a profit which will pay for the melting down of a considerable quantity of coin will not pay for a small quantity. The accumulation of sufficient quantities to pay for melting, and the elimination therefrom of the lighter coins require time and trouble. Unless a gold circulation is supported by adequate arrangements for the conversion of large credits into gold of full weight on demand, it will not by itself prevent quite a perceptible premium being paid for gold. In fact, since the gold market, like all other markets for raw materials, is concerned exclusively with large quantities, the gold value of credits can only be regulated by means of the convertibility into gold of sufficiently large credits.

The basis of monetary theory should be the money of account. To treat the money of account as the unit for the calculation of *prices* is to do it less than justice. It is primarily the unit for the calculation of *debts*, and its use in the calculation of prices merely follows from the fact that the quotation of a price is a proposal for the creation of a debt. The conception of a debt enforceable by law lies at the root of all the economic relations of human society, and this conception presupposes a money of account for the reckoning of the debt. Every day new debts are created and old debts discharged, but these changes only modify and do not destroy the identity of the corpus of debts, which continues in being

from day to day. If at any time the standard coin is changed, the same debts that were legally enforceable immediately before the change remain legally enforceable immediately after it. They and the unit in which they are reckoned continue, even if their value in terms of wealth be changed.

A change in the metallic value of the unit may be inconvenient, unjust, disastrous. In some circumstances it may be both equitable and beneficial. Or again it may attain justice through grave hardship, or ease at the cost of injustice. Whatever its merits or defects, the change of standard finds the network of debts in continuous existence. In form the network is the same after the change as before it. It is a mistake to define the unit of account in terms of the metallic standard; for the unit of account is that which persists even when the standard changes. Originally the English pound sterling was represented by 4995 grains of fine silver. Repeated reductions gradually brought it down to 1719 grains in 1601. From 1717 to 1816 it was represented alternatively by 1719 grains of fine silver or 113 grains of fine gold, and since 1816 it has meant 113 grains of fine gold. Yet it is always the same pound sterling; it would always have been wrong to *define* it as 4995 or 1719 grains of silver or as 113 grains of gold. The pound sterling can only be defined as the English unit for the calculation of debts. A pound is a pound. The French livre or franc suffered a more persistent debasement than the English pound. But both have preserved a continuity of existence from the Dark Ages, a continuity hardly surpassed by any human institution except the days of the week.

The only interruptions suffered by this continuity have occurred when, after a debasement or degradation of the standard or an over-issue of paper money, an equitable adjustment of debts is made, those incurred during the period of disturbance being made payable at something less than their face value. We shall have occasion to mention more than one instance of this in the succeeding chapters.

Sometimes two monetary units are in use concurrently. For example, when an issue of paper money has become

seriously depreciated it may be that people take to making bargains expressly payable not in paper but in metallic money. Sometimes, again, the monetary unit becomes disconnected from the legal money; debts and bank credits remain interchangeable but can only be converted into cash on payment of a premium. This has happened more than once in the great financial crises of the United States. In the crisis of 1873 there was even a small premium on the paper money, though the paper money itself was at a substantial discount in comparison with gold.

CHAPTER XII.

THE THEORY OF BANKING.

THROUGHOUT the preceding pages currency has been treated as something subordinate to credit. It is not suggested that that is the only legitimate standpoint, to the exclusion of the more commonly accepted view of metallic money as the primary means of exchange, with credit as a useful and economical supplement to it. But this treatment of the subject has the practical advantage that in business, as at present organised, credit holds the predominant position, and the functions of money have in actual fact become relatively subordinate. And it has the theoretical advantage that a sale for metallic money is in all cases analysable into the creation and extinction of a debt, i.e. into two credit transactions. From the opposite point of view a sale for credit might perhaps be regarded as the uncompleted portion of a sale for money, but in fact it usually happens that the sale is completed not by the payment of money but by being set off against another similar credit transaction. Nor can the significance of the legal tender quality of money be understood except in terms of debts (credits). An exchange of commodities is something voluntary: nothing legally enforceable occurs until a debt is created, and it is only when a debt is created that the law can prescribe how it is to be discharged.

The adoption of this point of view requires us to devote some space to the theory of banking. For bankers' obligations are the form of credit used as the medium of payment. In Chapter I. we defined a banker as a dealer in debts. For the most part, however, he does not *buy* debts, he *creates* them. Even when he buys them, as when he discounts a bill of exchange, the debts have usually been created for the express

purpose of being sold to him. Apart from such transactions a banker's purchases of debts are usually from other bankers.

The debts created by bankers or created for the purpose of being assigned to bankers are usually those that arise out of production, including, of course, the construction of fixed capital. Production may be regarded as making society the debtor of the producer. But the ultimate amount of the debt is speculative; it depends on the market for the product. Society will not pay its debt till the product is ready and is sold to the consumer. In the interval the banker undertakes society's debt (subject, of course, to discount) or such part of it as the producer immediately requires. The banker's obligation so assumed is to the producer a means of payment; whatever wealth he needs during the process of production he can buy with it. But he can only buy wealth which *exists*; the banker's obligations are not themselves wealth. At any moment there is a balance of indebtedness from society to the producers in respect of all that they have contributed by their services and their property towards the production of wealth, which is still incomplete, or which, being complete, is not yet marketed. In so far as this indebtedness of society has been undertaken by the bankers it apparently gives the producers the right to buy wealth which is not yet ready for them. But, as against this, the producers choose to keep a large part of their purchasing power in reserve unexercised, and this is what we have called the unspent margin. To this extent society is not called upon to pay its debt to them immediately and the bankers, who have taken over the debt, reap the benefit. While they earn interest from the producer and the trader in consideration of their having taken over the debt, nevertheless they do not have to *pay* this part of the debt at all.

It should be observed that there is no necessary equality between the bankers' liabilities on the one hand, and the indebtedness of society to the producers on the other. The reserves of unexercised purchasing power may be *less* than the stocks of incomplete or unmarketed wealth. In that case the difference must be provided for as part of the capital invest-

ments of the community. If, to take an extreme case, no one ever kept any credit unspent, so that there were never any outstanding banking deposits, the advances made by the banks could not exceed their own capital; a bank, in fact, would be merely an agency for investing a part of the savings of the community in temporary loans. Savings would have to be applied in exactly the same way to accumulating the necessary stocks of commodities in course of manufacture or awaiting sale, as to providing the fixed capital of industry and transport. If, to take a more probable illustration, the banks' advances to traders exceed the total of their deposits, the excess must be covered by their capital. Or, again, there may be, side by side with the banks, finance or discount companies which apply their capital to making temporary advances. If, on the other hand, the temporary advances made by the banks are less than their demand liabilities, they must hold some other assets. In any case, of course, they hold a certain amount of cash, but besides this they may hold some permanent investments. And in fact practically all banks do hold some permanent investments, while in some countries they act as underwriters and company promoters on a large scale.

Thus there is no *necessary* connection between the two sides of a banker's business—the demand liabilities which provide the medium of payment, and the temporary advances to traders. The union of these two functions in one agency is a great advantage from the point of view of convenience, and important consequences flow from their being so united. But in some respects it is desirable to study each in isolation from the other.

In the first place, let us consider the business of making temporary advances. The sale of goods to the consumer is a continuous process. To a great extent production is likewise a continuous process; and where it is not continuous it is usually periodical, depending on the recurrence of harvests. Between the processes of production and consumption there intervene those of transportation and dealing, in which the goods are almost necessarily dealt with in *large* quantities. The sales of the manufacturer, the purchases and sales of the merchant, and the purchases of the retailer are all made on a

large scale, and consequently the amount of goods in the hands of any one of these is subject to a succession of discontinuities, being large immediately before a sale or after a purchase, and small immediately before a purchase or after a sale. If there were no temporary borrowing every man's permanent capital would have to be enough to pay for the maximum quantity of goods that he at any time has in his possession, and whenever the goods on hand fell short of the maximum he would have a balance of idle money equivalent to the difference. From the point of view of the individual trader the advantage of temporary borrowing is that it enables him to escape the necessity of maintaining at times a large balance of idle money, which is earning no interest. In fact, it enables him to economise balances. It is immaterial whether the borrowing is from a banker or financier, or from the trader's customers. It might be done quite effectually enough by means of bills drawn by sellers on buyers, or by mere book debts between them, with periodical settlement. Whatever the practice may be, the purpose is to economise balances. And if metallic money is used, economy in balances means economy in the use of metal and a real saving of wealth. If, however, legal tender paper is, in any case, used (and this, as we have seen, is something distinct from bank credits, even if the latter are represented by bank notes) there is no saving of wealth to the community. Economy in balances means diminished issues of paper money, and the trader's saving is effected at the expense of the profits of issue which would accrue to the issuing authority.

The advantages of temporary borrowing, however, are not limited to the saving of loss of interest on idle money. Apart from the power of borrowing, a merchant would be limited in all his enterprises to the permanent capital of his business. Even if this permanent capital were enough to cover all ordinary fluctuations in his stocks, it would still be insufficient to enable him to take advantage of exceptional opportunities for large purchases, which his special skill and knowledge of his trade might disclose to him. Thus temporary borrowing introduces an almost necessary element of elasticity into the

merchant's business. Without it his special function of anticipating the future needs of the community would be arbitrarily circumscribed.

At a time of crisis the panic-stricken clamour for money is, in part at any rate, the consequence of the withdrawal of the usual facilities for temporary borrowing. Traders are compelled to keep larger balances (not necessarily of cash, they may be of credit) because they cannot rely on borrowing.

The other side of the banker's business, the assuming of obligations to be used by their creditors as the medium of payment, might be completely separated from the operations of making temporary loans. The assets held by banks of issue against their notes often include no temporary loans at all. This was true till a few years ago of the United States National Banks. In theory ordinary bank credits on current account might be based entirely on cash and permanent investments. All that is required is that the assets should be sufficient to meet the liabilities, and that the margin of cash should be sufficient to pay the credits on demand whenever necessary. If the practice of making temporary loans did not exist, it may be supposed that the need for bank credits as the medium for large payments would lead to the establishment of banks on some such basis. The service rendered by such banks to trade would be the avoidance of the trouble and expense of counting, transporting, and safeguarding the legal tender money which would otherwise have to be used. If the legal tender money were of metal they would also effect a saving by economising the use of it. But here, once more, if the legal tender money were paper, there would be no real saving, only a gain to the bankers at the expense of the profits of issue.

The existence of the unspent margin, a fund of unexercised purchasing power, is an opportunity of profit. This opportunity may be deliberately waived in order to maintain a metallic currency. The whole of the unspent margin might be held in the form of cash under an unqualified free coinage system, or if a part be composed of notes or bank credits, the notes and bank credits might be supported by an equal amount of coin or bullion. But if this rigid system be not adopted, a

part of this fund will provide profits for some one. In so far as the unspent margin is held in the form of legal tender paper unsupported by metal, the profit goes to the issuing authority. In so far as it is held in the form of bank credits unsupported either by metal or by legal tender paper, the profit goes to the banks, though the banks may share it with their customers by paying a certain amount of interest on current accounts.

Banks are often spoken of as providing "capital". They are said to receive capital from their customers, who would otherwise leave it idle, and to lend it out to traders who are in a position to use it fruitfully. The depositor who keeps a balance idle does, it is true, forego a power of command over capital which he might have exercised, and the borrower from the bank gains and uses the power which the depositor abstains from using. But the capital itself, the actual goods and services which the borrower buys, never comes into the banker's possession at all. The banker is never anything but a debtor and creditor. He provides capital in the sense that the shareholder and the debenture holder provide capital. The trader's balance sheet shows on the debit side sums due to the shareholders, the debenture holders and the banker, and on the credit side the value of what the economist calls capital, such as buildings, machinery, stock in trade, promotion expenses, etc. The abstention from spending, which provides the savings subscribed by the shareholders and debenture holders, is similar, from the standpoint of the balance sheet, to the abstention from spending, which provides the "unspent margin" and so makes the banker's business possible, though the motive in the former case is the wish to acquire an income-yielding investment and in the latter the convenience of keeping a certain amount of purchasing power in hand.

When banks are said to receive capital from their depositors and lend it out to traders, this is not quite an accurate description of what happens, even if capital be taken in the balance sheet sense. The only unexercised purchasing power that the banks receive from their depositors is the cash paid in, chiefly by those who receive cash rather than credit in the course of business, such as retail shopkeepers, railway and tramway

companies, collectors of working-class rents, etc. Apart from this the banks *create* purchasing power in the process of granting credits. It rests with them to increase or diminish the unspent margin by accelerating or retarding this process of granting credits. And as they increase or diminish the unspent margin, they increase or diminish the supply of "capital" for balance sheet purposes. As it is for *circulating* capital that bank advances are chiefly used, this increase or decrease in the capital items on the debit side of the traders' balance sheets is accompanied by a corresponding increase or decrease in the stock in trade or goods in course of manufacture on the credit side. Hence the effects upon production and all the other consequences which we have followed out, including the reaction upon the consumer's income and outlay, the demand for goods, the level of prices, the absorption of cash, etc.

Both the assets and the liabilities of the trader are commonly called "capital," and it is important to avoid the confusion which this double use of the term may cause. When there is said to be an abundance or scarcity of capital, what is usually meant is not that there is an abundance or scarcity of wealth adapted for use in production, but that the banks are willing or unwilling to lend. At the time when the scarcity of capital is most acute, that is to say in a crisis, there is an embarrassing plenty of commodities, because merchants are selling them at a sacrifice for want of the credit on which they rely for holding them.

Bankers' obligations which are to serve as a medium of payment should be obligations *already due*; in other words, they should be demand liabilities. If they were only due at a future date, it would be necessary to allow discount in reckoning their value. The trouble of calculation would make them an inconvenient means of payment, and the exact rate of discount allowed might have to be the subject of a bargain. Plenty of exceptions may be found to this general rule. In the eighteenth century many banks issued notes which were not payable as of right on demand. They might be payable at a certain interval after demand, or the banker might reserve himself an option of postponing payment for a certain time

and paying interest. And in Lancashire till the middle of the nineteenth century bills of exchange regularly passed from hand to hand as the means of payment for goods, accumulating an almost incredible number of endorsements in the process.

Deposits subject to notice and yielding interest are a form of banker's liability intermediate between a reserve of cash and an investment. But so long as notice is not given they cannot be used as a medium of payment ; the depositor cannot assign them by cheque until he has transferred them to current account.

The circumstance that always tells against the common use as a means of payment of any form of banker's obligation other than one payable on demand, is that a future obligation, which yields interest, tends for that reason to be kept as an investment till maturity. Economists have often argued that bills of exchange are "currency" as much as bank notes or demand deposits. But this at any rate is an essential distinction, and in practice bills sleep quietly till maturity in bankers' portfolios, only exceptionally being roused up to go for a moment into the daylight to be rediscounted and change their masters.

Exponents of the theory of banking and practical bankers alike are obsessed with the dangers of a great mass of demand liabilities. It is all very well to say that all the depositors and note holders of the Bank of England never will demand payment together, but if they did the Bank of England would be unable to pay. No bank can be quite safe, unless, like the old banks of deposit at Hamburg and Amsterdam, it retains a stock of specie equal to the whole of its demand liabilities.

The practice of maintaining as large a proportion as possible of the assets of the bank, other than the cash reserve, in the form of loans for short periods is commonly recommended as the best safeguard against these dangers. If the depositors begin to draw out money, the bank can protect itself by stopping the grant of fresh loans and letting the existing loans run off day by day as they fall due. Unless there is that simultaneous rush for money which is called a "run" on the bank, this process is likely so to strengthen the bank's cash

reserves as to enable it to meet all demands. If not, the bank may have to raise money elsewhere, and for this purpose the most efficient method is the rediscounting of Bills of exchange. At a time of stress lenders will be better satisfied with a security of which the capital will fall due in a short time than by stock exchange securities the capital value of which may be subject to a heavy depreciation.

This doctrine is true enough as far as it goes. But the question of the best assets to be held in support of a banker's demand liabilities raises a variety of other considerations.

In the first place, there are two quite distinct conditions of solvency ; the assets must exceed the liabilities by a sufficient margin, and cash must be always forthcoming so far as required to meet the demand liabilities. The former is a condition which applies to all businesses, the latter is peculiar to banks. And the rules of maintaining general solvency are in many respects the same for banks as for other businesses. There must be an adequate margin of capital, reinforced so far as possible by a balance sheet reserve ; every reasonable precaution must be taken to be sure of the solvency of people to whom loans are granted ; before profits are divided, proper provision must be made for bad or doubtful debts and for the depreciation of assets, such as long term investments. A manufacturer has a large fixed capital and may have little or no temporary indebtedness ; a merchant will have a relatively larger temporary indebtedness. But temporary indebtedness will take a much smaller place even in a merchant's balance sheet than demand liabilities in a banker's. In order to support this large liability of a fixed money value, the banker requires to have adequate assets of a ~~fixed~~ money value. Long term investments are liable to an indefinite capital depreciation, and consequently the banker needs short-term investments, not merely to help him in maintaining cash payments on demand, but to keep him solvent. The snare of long-term investments has been demonstrated again and again by the failure of savings banks managed with scrupulous care and apparently with prudence. They cannot remain solvent if they have to buy investments at a high price when savings are plentiful, and to sell them at

a low price when savings fall off. In countries where the mercantile business is relatively small, as compared with the volume of production, banks are tempted to venture on long-term investments. So long as they maintain a considerable proportion of short-term securities and choose suitable " gilt-edged " long-term investments, there may be no harm in this. The danger is that they may assume the functions of company promoters or underwriters, and may get burdened with blocks of securities which are either unsaleable or can only be realised at a heavy sacrifice. Or in an agricultural country they may advance sums on mortgages of property which will not fetch adequate sums in the market in case of foreclosure. The vice of such practices is not so much that the investments are for long terms or that the capital is not repayable—indeed in the case of mortgages the capital is repayable—but that the value of the investments themselves is doubtful. But this uncertainty of value is itself a characteristic of long-term by contrast with short-term investments. The chance of a merchant who appears perfectly solvent in June failing in September is small. The chance of land which forms the security for a mortgage suffering a serious deterioration of value in the course of three or five or ten years is considerable. It is rightly considered a principle of sound banking that a large proportion of the bank's assets should consist of bills, advances or other short-dated securities, but the most cogent reason for this is that it is difficult otherwise to maintain its general solvency.

Even if banks do not themselves enter into the investment market as underwriters and run the risk of tying up part of their assets in unrealisable shares, they may get into the same difficulties by advancing money to the investment market. The embarrassed underwriter, compelled to hold the securities which the public will not buy, must have recourse to his banker. If he can put down adequate security the banker will grant him an advance. But if his is not an isolated case, if the investment market as a whole is embarrassed by a failure of the investment demand from the public, it may be impossible to realise securities which are in themselves irreproachable. When investment securities have to be sold, the purchase

money can only be obtained either from the savings of the investing public or from the creation of bank credits. Consequently the extent to which the aggregate of bank credits can be reduced by the sale of such securities is limited by the supply of savings available for investment. Advances on investment securities, even though they appear to be a very liquid asset, are sometimes found in an emergency to be frozen up. The existence of any large class of traders, whether they be bankers, underwriters, finance companies, or any others, with long-period assets and short-period debts, is always a source of danger. This is the real ground of the prejudice against what are called "finance bills" or "accommodation bills," i.e. bills of exchange drawn not to provide money for the purchase of goods destined for an early sale but to cover a deficiency of ready cash. There is absolutely no harm in borrowing to meet a deficiency, *provided* the deficiency is temporary. There is no special virtue in a deficiency caused by the purchase of goods. In the course of business there may be a hundred and one legitimate reasons for anticipating future receipts or for abstaining from calling in loans to provide funds for the purpose of defraying an immediate liability or of seizing a promising opportunity. The vice of the finance bill is in the use of it to raise money for the construction of fixed capital, when the necessary supply of *bona fide* savings cannot be obtained from the investment market. This abuse of the system was a conspicuous feature of the Overend and Gurney crisis of 1866, and also of the United States crisis of 1907.

In considering the means of maintaining the payment in cash of a bank's demand liabilities, we must distinguish between the requirements of normal times and those of a crisis. In normal times the responsibility must rest exclusively on the individual banker; in times of crisis, while he must play his part, more depends on the attitude of the authorities, whether the Government or a central bank, in whom the control of the banking situation ultimately rests. In normal times the banks are in competition with one another. They endeavour to attract customers by the advantages they offer, in the form either of financial facilities or of local convenience. Each

bank has its clientele, people who have chosen for one reason or another to give it their custom. For the most part the borrowers from it will be included among its depositors. If a bank is a little too free with its loans, its customers will on balance pay away greater sums to the customers of other banks than they will receive. It will find day by day, when it settles accounts at the clearing-house, that it has to meet an adverse balance by paying away a part of its cash reserve. If it is to keep a cash reserve in due proportion to its liabilities, it must restrict its advances or perhaps transform some of its other assets into cash, for example by rediscounting bills. Whatever measures it may choose to adopt, the effect is that it must no longer outstrip its competitors in granting loans. And on the other hand an unduly cautious bank will find a favourable balance due to it at the clearing-house; its cash reserve will grow at the expense of its other assets, and its profits will suffer through its interest-earning assets being too small in proportion to the total. Thus there is a tendency for all the banks to keep pace in the granting of credits; each can only extend its business by finding new customers, and the loans and advances that it can grant among a given circle of customers are practically limited.

A loss of cash may occur either through the grant of excessive advances or through a loss of confidence in the bank on the part of its customers. In the latter case the remedy is for the bank to borrow from its fellow-banks. So long as the loss of confidence is not deserved, so long as it can present a balance sheet that is demonstrably solvent, it can do this. The banking community will always be anxious to help one of their members, provided he be really solvent, for any banking failure will cause a shortage of the means of payment and will put them in difficulties. But it is one thing to be solvent and quite another to be able to give conclusive evidence of solvency. The solvency of a banker depends in the last resort on the solvency of those of his customers to whom he has lent. Of some of these he alone knows the affairs. Many a bank has come to grief and has yet paid 20s. in the pound when wound up, with a handsome balance over

for the partners or the shareholders. There is thus a tendency, which may cause some injustice, for banks to prefer the claims of borrowers with large businesses, whose credit is a matter of general knowledge, to those of smaller borrowers, who in all other respects may be better deserving of accommodation, unless the latter can offer unimpeachable collateral security.

In assuming demand obligations a banker's functions are passive; it is in lending that he plays an active part in trade. In lending he takes the responsibility for two kinds of decisions; he selects the borrowers, and he determines the rate of interest. The borrowers want credit for the purposes of production. All production is more or less speculative, since its success cannot be measured, till it is complete and the product has been sold to the customer. By lending, the banker to some extent participates in the speculation, though of course he can guard himself against the chance of loss by exacting collateral security from the borrower, on whom the main burden of the risk falls. By making the market rate of interest, the bankers, as a class, keep the demand for advances and consequently the supply of credit in their control.

Bankers aim at keeping a fixed proportion between their cash reserves and their demand liabilities. The nature of these cash reserves depends very much on the credit and currency system in vogue. They do not necessarily consist entirely or even mainly of legal tender money. In England the practice is for banks to keep considerable deposits at the Bank of England. They settle balances with one another by drawing cheques on these deposits, and they only draw out legal tender money when they need it to hand over to their customers. The great English joint-stock banks have a multitude of branches, and their cash reserve, which figures in their balance sheets usually under the description "cash in hand and at the Bank of England," consists partly of the working balances of cash needed for the day to day needs of all their branches, and partly of their credit balances at the Bank of England. These reserves are supported by another item in the balance sheet, "cash at call or short notice," which is money lent, chiefly to bill-brokers, practically from day to

day. Although it can be withdrawn almost on demand, it is different from a deposit with a bank in two respects ; first, it is not assigned away by cheque and so cannot be used as a means of payment ; secondly, it earns interest, not at the specially low rate allowed on a deposit subject to notice, but at a rate only a little below the full value of the use of the money. The bill-brokers who borrow this day to day money invest it in the discounting of bills of exchange. They resemble bankers in that their liabilities are more "liquid" than their assets, and they are in practice *more* exposed to sudden demands than the bankers themselves. For the bankers regard this money at call as the means of replenishing their reserves if necessary. If their reserves run short they call some of the money up. The bill-brokers may be able to pay the sums called from the proceeds of bills falling due ; if not, they borrow from the Bank of England. Whenever credit begins to outstrip cash in the London market, the effect is felt in a tendency on the part of the bill-brokers to borrow from the Bank of England, and indeed the "Bank rate" is practically the rate at which the bank is prepared to lend, if requested, in those circumstances. When the Bank so lends, its assets are increased by the amount lent and its liabilities by an equal amount. The Bank's liabilities are deposits, and the additional deposits in the hands of the bill-brokers are passed on by them to the banks who have called money from them. Thus the effect is that the credit balances of the joint-stock banks at the Bank of England are increased, and the shortage in their reserves is made good. When the Bank rate is high, the bill-brokers cannot afford to borrow unless they charge correspondingly high rates for discounting bills. Consequently the rate of discount, as well as the market rate for day to day money, tends to follow the Bank rate. This system of keeping money at call enables the great London banks to conduct their business in normal times without borrowing.

The banking system of the United States resembles that of England in that one bank deposits a part of its reserve with another. Before the passing of the Federal Reserve Act of

1913, a number of large towns were designated reserve cities, and there were three "central reserve cities" (New York, Chicago, and St. Louis). The National Banks in the reserve cities held deposits from the National Banks in the smaller places round them, and these deposits were counted as part of the statutory reserves of the latter. The National Banks of the central reserve cities likewise held deposits from those in the reserve cities. This differed from the English system in that there was no centralisation of the deposits, which were thus counted as cash reserves, in a single institution. The Federal Reserve Act has, however, made a further approach towards the English system, in that, though even yet there is not a single central bank for the whole of the United States, the country is divided up into districts, and there is only one Federal Reserve Bank for each district. Moreover the Federal Reserve Board introduces some unity of control into the Federal Reserve Banks of all the different districts. If circumstances demanded a general contraction of credit, it would be possible to move the Federal Reserve Banks to make a simultaneous advance in the rate of interest. The United States system still differs in many important respects from the English. Every national bank is required by statute to maintain a reserve equal to a certain proportion of its liabilities, and this reserve must be deposited in the Federal Reserve Bank.¹ If the reserve falls short, it will be replenished by rediscounting bills with the Federal Reserve Bank. National Banks are prohibited from having branches, so that there are thousands of independent banks, some very large and others very small.

On the continent of Europe the prevalent practice is to hold the cash reserves in legal tender paper issued by a central bank, and to replenish them when necessary by rediscounting bills with the central bank.

Under all these systems the effect is that, in order that the

¹ For demand deposits the proportion was fixed by the amending Act of 21st June, 1917, at 13 per cent. in central reserve cities, 10 per cent. in reserve cities and 7 per cent. elsewhere. The proportion for time deposits is 3 per cent. Originally the proportions were 18, 15, and 12 per cent. and the reserve was to be held partly in cash and partly in the form of deposits with the Federal Reserve Bank.

ordinary banks may replenish their reserves when necessary, the central bank has to lend. When gold is wanted for export, as the ordinary banks do not keep more gold than is required for their day to day needs, the gold is withdrawn from the central bank. Thus the demands on the central bank are always the index of the financial situation.

In times of financial tranquillity, when there is no crisis, or threat of a crisis, it is discreditable for a bank to suspend payment. It may be as much the banker's misfortune as his fault, but the hard fact remains that he has failed to meet his engagements when his neighbours have fulfilled theirs. The failure of a bank, like all acts of bankruptcy, is a breach of faith. But it is somewhat more blameworthy than the failure of a mercantile firm. It is part of the business of a merchant to take risks; it is the duty of a banker to avoid them. If all merchants take risks, then some of their ventures must fail. The mere fact of failure is not evidence that a merchant has taken *undue* risks. But the mere fact of failure is evidence against the banker.

On the other hand, at a time of crisis the case is rather different. If all the banks are suffering, not from an insufficiency of assets to cover their liabilities, but from a shortage of legal tender money, no one of them is discredited by embarrassments which are obviously attributable to a miscarriage of the currency system. The currency system is in the last resort regulated by the legislature, and it is not within the power of any individual banker to control it. If it breaks down, the responsibility rests on the legislature, or on the authorities entrusted by law with the management of the system.

It may perhaps be retorted that this is only so if the legislature has set up some artificial and unsound system, and that, if the clear and simple principles of the free coinage of gold be adopted and enforced, the responsibility may be left with the bankers so to shape their affairs as always to be able to meet their engagements. From this point of view a banker's business may be regarded as composed chiefly of dealings in "options" and "futures" in gold. A bank credit

is an option to buy gold at any time; a loan or bill is an undertaking to deliver gold at some fixed future date. If, then, the banker is given the right to pay in paper instead of gold, he is thereby enabled to avoid the fulfilment of his engagements, unless the paper itself is convertible into gold. But if this is the correct theory the banker is exposed to the same dangers as any other dealer in futures and options. If the state of the gold market makes it profitable for his customers to exercise their "options," in other words, if the market value of gold tends to rise above its coinage price,¹ he may be called upon to find more gold than he possesses or can lay his hands on. At such a time he cannot get it from his fellow-speculators because they are in the same difficulties as he. Neither he nor they are necessarily to blame; the gold market may be influenced by conditions abroad, over which they have no control and of which they have no direct knowledge. It seems, therefore, that on this theory the risks of the speculator are inseparable from banking, unless the practice of the old banks of Hamburg and Amsterdam be adopted and the whole of the deposits be covered by bullion or specie.

But in reality this is not a tenable theory of banking at all. If the banker's obligations are payable in gold, that is because *all* debts are payable in gold. If the law makes them payable in gold, the law can at any time make them payable in something else. It is vain to say that it must not do so; in practice it frequently does. There is much to be said for the view that all currency systems *ought* to be based on a metallic standard, and that once the standard is chosen it ought to be adhered to at all costs. But however firmly the standard may be entrenched in the law, the law always *can* be altered, or even broken. The power of issuing paper money always exists in the background, even if it be expressly forbidden by law. The State cannot divest itself of this power or of the responsibility attached to it.

When in the throes of a crisis all the banks are faced with

¹ The option entitles the customer to receive the gold from the banker at the coinage price, paying for it by a cancellation of the banker's debt to him, which like all debts is computed in the legal money of account.

a desperate shortage of currency, the responsibility for taking measures of relief necessarily devolves on the State. Even if the fault lies with the individual banks, the remedy is not within their power. The pressing necessity is to provide the means of payment, and only the State can do this. The State cannot be relieved of this responsibility unless, as in China, the means of payment are settled by custom, and the powers of sovereignty are really insufficient to modify this custom.¹

So long as the power of enacting what shall be the lawful means of payment resides in the State, the State has the responsibility for using that power. If it decides, for good reasons or bad, not to help the banks, there is likely to be a universal suspension of payments, such as has occurred more than once in the United States. Where all the banks suspend, no individual banker need feel ashamed. Suspension becomes the vogue, just as, when George III. was mad, it became the fashion for every one at Court to claim to have had a period of insanity in his past.

In fact, there is really no reason why the banker who has conducted his affairs with ordinary prudence should ever lie awake at nights oppressed by the abyss of demand liabilities at the edge of which his business is carried on. The demand for cash is not *capricious*. So long as crisis conditions do not arise, the circulation of money, being determined by the convenience of the public, will be approximately steady. A banker whose cash reserves fall off can readily replenish them from his neighbours, for the aggregate of cash reserves will not diminish suddenly. On the other hand, when a general shortage of cash does occur, this is a sign that there has been an undue expansion of credit, and that is a matter for which the responsibility rests not with the individual banker but with the central bank as the representative of the State. So long as the ordinary banker takes care that his assets are good, and does not swell his loans and discounts beyond the due proportion to his deposits, he is doing his duty to society.

If this responsibility necessarily rests on the State, ought

¹ Or, theoretically at any rate, the power of the State over currency might be limited by a written constitution.

not the State to exercise some control over the activities of bankers at all times? It may be contended, with some force, that to defer the very beginning of control till the moment of crisis is to leave the preparations for defence till the outbreak of war. This is a much controverted question. It is not generally disputed that a close regulation of the right of note issue is desirable. It is usual, indeed, to restrict the right to a central bank, and to make its notes the paper money of the country, with the privilege of legal tender. Even where private banks of issue are permitted, it is usual, as in the United States and Canada, to make elaborate arrangements to secure the convertibility of the notes in all possible circumstances. The reason of this is that there is not the same personal relation between a bank and its note-holders as between a bank and its depositors. There is a greater danger of the bank's obligation being either too much or too little trusted when it is represented by a note than when it takes the form of a deposit. Moreover, bank-notes may, in an emergency, be made legal tender, even if they are not normally so; or, not being made legal tender, they may become by force of circumstances the only means of payment available for retail transactions and the payment of wages. When the emergency comes, the difficulties of the situation may be greatly increased if the issuing banks have been allowed to get into an unsound condition.

A close State regulation of banks of deposit is more doubtful policy. It is easy to justify in principle. The banks provide what is in practice the principal means of payment in business transactions. That so vital a service should be well and honestly rendered is a matter of primary public importance. It is arguable, however, that it will be better rendered under a free system than if subjected to artificial limitations.

The question is not one that can be decided entirely by general principles. The purpose of control is to secure that the banks both have and deserve the confidence of the public. They must have sufficient cash reserves to pay their demand liabilities, and they must have good general assets. One bank cannot be more liberal than the rest in granting loans and discounting bills without having to meet an adverse balance

at the Clearing-House. This operates as an automatic check on the inflation of credit. One bank may, it is true, adopt a lower standard of cash reserves than another, and may increase its profits at the expense of its power to maintain cash payments. But the narrower its margin of cash the less scope it has for inflating its loans. If its reserve is already cut down to the minimum sufficient for its day-to-day needs, the slightest laxity in the extension of loans will put it in difficulties and compel it to borrow. Consequently, though the suspension of payments, when it does occur, is caused by the exhaustion of the cash reserve, this is really less likely to be due to a settled policy of cutting the reserve too fine than to an outburst of lending which dissipates a reserve originally sufficient. If a banker is tempted to seek the large profits which may be gained from imprudent banking, he will proceed to increase his loans. Were he to reduce his reserve, he would only hamper his own freedom.

A statutory regulation of reserves, such as is established in the United States, does little to promote sound banking. Apart from the obvious criticism that just at the time when the banks ought to be using their reserves, they cannot pay them out without reducing them below the legal proportion, there is the serious weakness in the system that it does nothing to prevent that inflation of credit which leads to the depletion of the reserves. Either an individual bank or the banking community as a whole remains free to set in motion forces which must in time reduce the reserves below the proportion, and, when this inevitable result comes about, the effect of the legal limitation is only to intensify the difficulty by stopping fresh business. Three times, in 1873, 1893, and 1907, there has been an almost general suspension of cash payments by the American banks. The Federal Reserve Act has done much to guard against the dangers to which the system established by the National Bank Act of 1863 was subject. If the reserve of any bank runs short it can be replenished by rediscounting paper with the Federal Reserve Bank, and if paper money is required rather than bank credit, the Federal Reserve Bank has a power of issue which, though restrained by

the sliding scale of taxation, is not subject to any cast iron limit. Thus it is no longer the statutory reserve proportions but the control of the reserves by the Federal Reserve Board that is relied on to prevent inflation. And that being so it is arguable that the statutory reserve proportions (which have, in fact, been substantially reduced below the ratios adopted in 1863) no longer serve any useful purpose.

CHAPTER XIII.

WAR FINANCE.

WHEN we criticise human institutions as they are, and attempt to gauge their soundness under strain on the assumption that, whatever the strain, they remain unaltered, we are implicitly taking it for granted that the strain is subject to a certain limit. We have not been supposing that the currency systems which we have been considering were capable of remaining in all circumstances unaltered. We have recognised that at a time of crisis the law may be broken or even amended. We have seen the statutory limitation of the Bank of England's right of note issue suspended by an executive act, or banks of issue charging a premium on gold when an excessive export is threatened. We have shown that the greatest *normal* strain to which the currency system of a country can be exposed is that which arises from the occurrence of a crisis in a neighbouring country. This strain can be called "normal," because financial crises are as unavoidable in credit systems as shipwrecks in navigation. The management of credit is perilous, just as is the management of a ship, and financial crises like shipwrecks are the penalties of a miscalculation, immunity from which is almost unattainable. But so long as crises of this type, arising from the inherent difficulties of the regulation of credit, are in question, the departures from the law, like the law itself, may be assumed to be directed exclusively to the maintenance or restoration of sound conditions. This singleness of purpose constitutes the limitation implicitly assumed.

The circumstances which we now have to investigate are different. We shall find an imperative national need overriding all other considerations, and leading to disorders in the credit system which could hardly arise from any less over-

whelming cause. Scarcely any contingency but war¹ is sufficiently grave to produce these consequences, and therefore the subject of examination may practically be narrowed down to the relations of currency and credit to war finance.

War finance is a branch of Government finance. By finance we mean the art of providing the means of payment. In theory the sovereign state can exact services from its subjects without payment, as, for example, it may compel them to serve on juries or in the army. But in practice this method of compulsion is limited in its scope, and the State pays for those services which it cannot conveniently compel, and buys those goods which it cannot conveniently requisition. In fact, vastly the greater part of the activities of the State are carried on by the services of paid employees and with commodities bought in the market. It is the function of Government finance to provide the means of payment needed for these purposes. This is done primarily by means of taxation. The individual citizens are compelled to contribute money to the Government. The taxes paid form part of what we have called the "consumers' outlay" of the taxpayers. The money is received by the Government, and expended upon the goods and services necessary for carrying on the business of the State; it is then included in the "consumers' income" of the Government employees and of the people who produce goods which are sold to the Government. If the income and expenditure of the Government are equal, the corresponding items in the consumers' outlay and the consumers' income, taken over the whole community, balance.

But, of course, even if income and expenditure are ultimately equal, the proceeds of the taxes cannot be expected always to come in exactly as and when they have to be spent. At one time income will overtake expenditure, at another it will fall behind, and temporary borrowing is needed to equalise the balances of the Government, as much as those of private traders. Moreover, Governments, like private traders, from

¹ Revolution, it is true, has as sinister a record as war in the wrecking of currency systems. But this has usually been the work of Revolution complicated by either foreign or domestic war.

time to time have to incur large items of capital expenditure. As to how they ought to draw the line between expenditure chargeable to revenue and expenditure chargeable to capital, and what provision they ought to make for sinking funds, these are questions which do not arise here. It is enough that, besides raising revenue by taxation, Governments find it advisable to raise it by borrowing, both temporary and permanent. When they do so, they borrow from the same sources and through the same channels as private traders. Their temporary borrowing will be mainly from banks and discount companies. Their permanent borrowing will be from the savings of the community.

How does it come about that Government finance trespasses on the domain of currency and credit? So long as the Government only raises money by taxation, by loans which are supplied exclusively from genuine savings, and by temporary borrowings in anticipation of such taxation and such loans, which are completely discharged from their proceeds when received, it is doing much the same as a private trader, though on a larger scale. The sums that it takes by tax or loan from the public are subtracted from what is applicable out of the consumers' outlay to form the demand for other commodities and services, exactly as if the services of the Government were just one among the various objects upon which the consumer could elect to spend his money. In applying the sums so raised, the Government diverts a portion of the productive resources of the community to public purposes. For the goods and services so diverted it has to compete in the market just as if it were a large private firm. The Government is a trader, selling law, order, and the organisation of society to its customers, the taxpayers.

Suppose that, owing for example to the outbreak of war, the expenditure of the Government is enormously increased. It has to raise increased sums by tax and loan, and it has to divert to its own purposes a correspondingly increased proportion of the productive resources of the country. By raising more money, it diminishes the sums left in the hands of the public for other expenditure. If it could raise all the requisite

funds by taxation and by borrowing in the home market, this diminution in the expenditure of the public would so reduce the demand for commodities as to set free all the capital and labour needed.

Any considerable amount of war borrowing must affect the world's market for capital. The borrowing country may be normally either a borrower or a lender, or perhaps on balance its savings may just meet its own normal capital requirements. Confronted with the task of raising War Loans, if it is a lender, its power of lending will be diminished, or suspended, or it may be turned into a borrower from foreign countries; if it is a borrower, its borrowings will be increased; if it is neither, it will become a borrower. The mere diversion to war purposes of part of the domestic savings ordinarily available will have this effect, even if no money is directly borrowed from abroad by the Government. This import or diminished export of capital will affect the foreign exchanges. As we have already seen in Chapter IV., imports of capital must take the form of imports of goods, and in order that the additional goods may be attracted the market for them must be improved. In other words, there must be a higher level of prices, and, unless a sufficient expansion of credit occurs to raise prices to the level required, the exchanges will become favourable and gold will be imported.

At the outbreak of war there will almost certainly be a considerable credit expansion. A war usually starts with a heavy initial expenditure on mobilisation and other preparations, and it is impossible to raise large sums immediately from loans and taxes. Time is required to prepare either, and in the meantime the yield of the ordinary revenue is likely to be adversely affected by the derangement of business, the interruption of foreign trade, etc. The result is that war finance almost invariably begins with a large amount of temporary borrowing. If this temporary borrowing were *merely* in anticipation of future receipts from loans and taxes, it need not necessarily mean any expansion of credit. The prospect of the curtailment of demand, which should occur when these future receipts are realised, might be sufficient to damp down

enterprise to such an extent that the temporary borrowings by private traders would fall off as much as the temporary borrowings of the Government increased. If that were so, the additional import of capital, direct or indirect, would necessitate some importation of gold to stimulate the creation of credit, and to attract the corresponding additional import of goods. But the presumption is that the private demand for loans will not immediately fall off. Not only is the shrinkage of demand something still in the future and uncertain, but in any case a sudden *change* in the character of demand tends to increase temporary borrowing. The stocks of goods for which the demand is stimulated are depleted, but the production of these goods becomes more active and needs more money to finance it. The stocks of goods for which the demand becomes less tend in the first instance to accumulate, and the indebtedness of the dealers in those goods is for the moment increased rather than diminished. The effects of war on trade vary almost indefinitely according to the circumstances, but perhaps the nearest approach to a principle of general application is that there will be a considerable re-shaping of demand. There will, for example, be an increased demand for all kinds of war-like supplies and a diminished demand for luxuries, while the demand for necessities will presumably continue unabated. And cutting across these tendencies there may be all the complicated reactions arising from a partial interruption of foreign trade. The prospect of forced borrowing by the Government on a large scale will stifle the demand for existing stock exchange securities, and stock exchange operators and underwriters will find themselves loaded up with securities which are saleable, if at all, only at a great sacrifice. The disorganisation of business may be so great that an almost universal bankruptcy can only be staved off by special measures for suspending the obligations of debtors, like the crop of moratorium statutes with which Europe blossomed out in 1914.

A Government, indeed, faced with a great war, cannot afford to let half the business of the country slip into bankruptcy, and if the embarrassed traders are propped up, either by lavish advances granted them by arrangement, or by a

special statutory moratorium, the result is an increase in the aggregate temporary loans to traders.

At the outset, therefore, the financing of a great war is almost invariably accompanied by a considerable amount of temporary borrowing on the part of the Government, against which there is at any rate no set-off in the shape of any diminution of private borrowing. The exception would be where the violent changes in values are allowed to culminate in a financial crisis and a collapse of credit. Apart from such a catastrophe, there will at the start be on balance some expansion of credit. The extra credit created is paid away by the Government, just as it would be by a private trader if it were created in the ordinary course to finance production. In so far as the Government keeps down its borrowing by postponing payment, it merely shifts the task of raising money on to the shoulders of the contractors and others from whom it buys. What is temporarily withheld from them they have to borrow from their bankers. The credit created in this way, directly or indirectly, on behalf of the Government, will be extinguished, not, like an ordinary advance to a trader, when the goods produced are sold to the consumer, but when the Government is enabled to raise the necessary funds by permanent loans or extra taxation. Till then it remains in circulation, and swells the purchasing power of the public. Those to whom it is first paid on being created, like everybody who receives a sudden accession of profits or earnings, will probably spend some and retain some in hand. At the outbreak of war, when the future is uncertain, and when moreover there is every likelihood of opportunities for investment being quickly offered that are both profitable and patriotic, people are likely to retain more and to spend less than from a similar windfall in time of peace. The creation and disbursement of this additional credit will therefore add something to the consumers' outlay, but less of it will be so added and more will be added to balances than in time of peace, so that the quickening of trade will not be in full proportion to the quantity of additional credit created. But some quickening of trade there will of course be, and this in itself would tend

to produce an adverse movement of the foreign exchanges, since the increase of the consumers' outlay draws on stocks of commodities, attracts additional imports, and diverts possible exports to some extent to the home market. The actual state of the exchanges (apart from the very serious results which may ensue in particular cases from the interference with foreign trade) will be the resultant of this trade activity, which tends to make them unfavourable, and of the import of foreign capital, which tends to make them favourable. As to which tendency will predominate, that depends on several factors, such as the magnitude of the temporary borrowing, and the degree of caution of the public in spending, but specially on the country's power of borrowing from abroad. At the outbreak of war in 1914, England was in a unique position of financial strength. Vast sums, rising sometimes to £200,000,000 in a year, were being sent abroad for investment. A very large proportion of the international trade of the world was financed from London; the "bill on London" was the recognised medium of payment, not only for the greater part of the trade to which English firms were parties, but for much of the trade in which England was not otherwise interested at all. Thus the assets of the London banks included a very great mass of loans secured by bills based upon goods in course of production or transit or awaiting sale all over the world. The declaration of war, the prospect that all the country's resources would be needed to support a struggle *à outrance*, the uncertainty as to the safety of communication by sea, the prohibition of trade with enemy countries, produced a sudden derangement of all this financial machinery. The export of capital came to an abrupt stop. The drawing of bills on London was interrupted, partly because merchants were afraid to consign goods while the marine insurance market was in a state of chaos; partly because London had become unwilling to lend; partly because the financial houses on which traders were accustomed to draw were faced with embarrassments owing to the impossibility of receiving money from their enemy debtors and others.

The sudden cessation of bills on London completely dis-

located the foreign exchange markets. The bill on London was the normal means of remitting money between London and other countries; it was also the instrument by which London bankers lent money for the purposes of international trade. When London stopped lending, it incidentally destroyed the usual means of remittance. Dealers in exchange found multitudes clamouring to remit to London: hardly anyone wanted to remit in the contrary direction. It seemed that no quotation could be fixed which would come near to equalising supply and demand. The usual resource of sending gold was for the moment cut off, partly by various suspensions of specie payments and prohibitions of export in other countries, partly by the new complications of war risks, which insurance companies were unwilling to accept. The result was that the foreign exchange markets were for weeks in a welter of confusion. All quotations were "nominal," and credits in London could hardly be bought at any price. As they emerged from this state the exchanges were found to be highly favourable to London, and as the trammels on the movements of gold were removed enormous quantities of gold were received by the Bank of England.

The experience of this exchange crisis showed in an extreme form the favourable movement of the exchanges occasioned by the outbreak of war in a country so favourably situated as England for drawing largely and instantaneously on the capital resources of the world. In appearance the crisis arose from the dislocation of the normal exchange machinery. In essence it was caused by the refusal of London to lend. It was not merely that London had become less willing to finance international trade by accepting and discounting bills, but that the usual stream of new capital issues of an international character, which in time of peace creates a steady demand for remittance from London to the foreign countries where the capital is to be spent, was interrupted. The case was exceptional, on account alike of the special position of England and of the magnitude of the war. But the same tendency occurs, though in a smaller degree, whenever a great lending nation goes to war. In 1914, in

the case of France, in spite of the severity of the economic crisis and of the perils of invasion, the exchanges were for some time favourable. Even in Germany the exchange on the United States was favourable for a few weeks. Russia and Austria-Hungary, being borrowers rather than lenders, experienced adverse exchanges from the beginning. If the great lending nations had not been themselves involved in the war and had been in a position to help them financially, they also might have kept their exchanges up, notwithstanding the profuse issues of paper and credit required to finance mobilisation. As it was, they found it difficult to raise money even to pay their existing liabilities abroad.

The initial difficulties once surmounted, it becomes necessary to provide funds, from taxes and loans, *pari passu* with the expenses of the war. Such taxes are imposed as the country can stand, and the balance of the war expenditure has to be provided by loan. The issue of the first War Loan finds an accumulated burden of temporary debt representing the expenses incurred since the beginning of the war and a daily deficit in the present and future. What are the sources from which money can be raised? In the first place, there are the savings of the people. The people may abstain from spending money that they would otherwise have spent, either on their own enjoyment or on investment, and may surrender the purchasing power thus kept unexercised to the Government in exchange for holdings in the War Loan. In the next place, existing securities may be sold. But of course it is no use subjects of the borrowing country selling securities *to one another*. This will not increase the available fund of savings to be subscribed to the War Loan. The selling of securities will only be fruitful if they are sold abroad. Thirdly, there may be direct foreign subscriptions to the War Loan, especially from allied countries, which for one reason or another do not need all their financial resources for their own warlike preparations, or from favourably disposed neutrals. Indeed belligerent nations often float loans in foreign countries, the terms being specially devised to attract subscribers in those countries. In the Russo-Japanese War, Russia borrowed

largely in France, and Japan in England. In the Balkan Wars of 1912-13 the Balkan States borrowed from France. The present war has of course seen England and Germany lending to their respective allies on an enormous scale, and England in turn borrowing from the United States. But even when a belligerent brings out what is ostensibly an internal loan, payable and repayable in its own currency, foreigners may be induced to subscribe to it as an investment.

But suppose that the most has been made of all these sources, and that the funds raised are not enough. A man in business, who cannot raise all the capital he needs, either abandons or curtails a project which he cannot carry through. Is a nation at war to leave its forces insufficiently equipped, because it cannot raise money? If it is at war at all, success must be a matter of life and death; there is no half-way house between a whole-hearted prosecution of the war and an immediate peace. And as we have already seen it is possible to stave off a want of funds by temporary borrowing. Temporary borrowing has this advantage—or this danger—that the money to be borrowed *need not exist*. Directly or indirectly the lender is a banker. What he lends is a credit—his own obligation. This obligation he can himself create. If the gold basis of credit is to be preserved, it is no doubt necessary to contract the credits granted for other purposes, in order to make room for those granted for the war. If this condition is to be observed the new intrusion of the Government into the short loan market will lead to a raising of the rate of interest. Traders will thereupon be discouraged from holding stocks of goods in hand, and in fact, in so far as advances to the Government are substituted for advances to traders, the war is being practically financed by drawing on the existing stocks of commodities. When in time of peace credit is contracted, the consumers' outlay is diminished. But now we are supposing the advances to private traders to be contracted only to make room for equal advances to the Government. The credits granted to the Government are spent as rapidly as those granted to the traders would have been, so that the consumers' income and the consumers' outlay are presumably

undiminished. Goods are bought as quickly as before, and the high rate of interest operates to prevent orders being given for the replenishment of stocks.

In the case of a country like England, which possesses such vast banking assets based on merchandise in all parts of the world, the stocks to be drawn upon in this way are correspondingly great. But neither in this case nor in any other are they unlimited. If stocks are reduced below the point at which it is possible to keep them for the duration of the war, they must presently begin to increase again. To the extent that they increase they will tend to crowd the Government out of the temporary loan market; so that the problem of raising money will to that extent be only deferred, not solved.

And not only are stocks kept down by the high rate of interest and the difficulty of borrowing, but there is also great difficulty in getting orders executed owing to the diversion of the productive resources of the community to war work. In time of peace the contraction of credit will occasion a fall of prices. But the reduction of stocks, the difficulty of replenishing them, and the continued demand from consumers will combine to send prices up. In fact, the approaching scarcity of non-warlike commodities, threatened by the absorption of the nation's economic efforts in war, will enable the holders of those commodities to sell them at high prices and to discharge a great part of their indebtedness, more, in fact, than merely in proportion to the reduction of stocks. A merchant's indebtedness may be normally equal, say, to two-thirds of the probable selling value of his merchandise. If he reduces his stock in trade by one-third, and sells this third at 50 per cent. more than he expected, he will realise a sum equal to half the original valuation of the whole stock. If he applies the whole of the sum so received to discharging his indebtedness he will reduce it to one-fourth of its former figure. The combination of a tight money market, high prices, and extreme caution on the part of both lenders and borrowers, will, therefore, lead to a reduction of stocks, but to a still greater reduction of bankers' loans. Moreover, one result of the difficulty of borrowing is that traders take advantage of their financial strength to free

themselves from dependence on their bankers. The usual process by which they equalise balances, borrowing when they buy and paying off advances when they sell, exposes them to unwonted risks, and they may choose to keep large sums idle occasionally, rather than trust to borrowing whenever they have large payments to make. These idle balances need not be money ; credit will do just as well, unless there is a want of confidence in the solvency of the banks. Consequently just at the time when the bankers' loans to traders fall off, there may be a steady increase in the bank balances of those same traders, the consequent gap between the assets and liabilities of the banks being filled by the advances to the Government. The result is that the banks can increase their loans to the Government by much more than they reduce their loans to traders without disturbing the equilibrium of the money market. Money is thus being provided for the Government by traders devoting sums, which might have been used for buying commodities, not merely to paying off their own indebtedness but to accumulating liquid balances. A striking example of this tendency is to be seen in the immense quantity of paper money which France has been able to digest with a comparatively small disturbance of the exchanges. A similar explanation may be given for the remarkable demand for Treasury Bills in England, for it is even more convenient for a merchant to hold his balance in the form of a short-dated bill than in the form of an idle bank credit. If he holds a bank credit he gets no interest, or at best interest only at the low rate allowed on time deposits. If he holds a Treasury Bill he gets, in the form of discount, the full rate of interest on his money and he can discount the Bill at any time without loss if he needs cash.

In applying their receipts, either to pay off their indebtedness or to accumulate balances, merchants are not merely abstaining from laying out capital on purchases for business purposes, they are also abstaining from spending profits which they might use for their personal expenditure. This is a form of saving. What the merchants abstain from spending they can empower the Government to spend,

CHAPTER XIV.

WAR INFLATION.

THUS besides taxation, and permanent borrowing at home and abroad, and temporary borrowing in anticipation of these, a Government has three legitimate forms of temporary borrowing open to it. At the outbreak of war, when the direct or indirect importation of foreign capital favours an expansion of credit, it can borrow up to the point at which this tendency is exhausted; next, if loans to traders are restricted, loans to the Government can be substituted for them; finally, in so far as traders seek to accumulate liquid balances the banks can increase their loans *pari passu* with the consequent increase in their liabilities, or alternatively the traders may hold their additional balances in the form of short term loans to the Government.

But the sums that can be so raised, like the available supply of savings, are still limited. Suppose that the Government takes full advantage of these resources and still has not enough. The exigencies of war pay no more regard to the resources of the money market than to the supply of savings. The Government goes on, day by day and week by week, incurring liabilities which are dictated by national needs. The War Loan is intended to meet the excess of those liabilities over the yield of taxes for the past and for an appreciable period into the future. If it does not, the Government ~~must~~ meet the deficiency. If temporary borrowing within prudent limits is still insufficient, the only resource left is to borrow ~~from~~ the banks beyond those limits. This is the point at which the stress of war begins to drive the Government to overstep the limits of sound management of currency and credit. The immediate need of the Government is for the *means of payment*.

This need can be met by the creation of a banker's obligation. The banker will assume such an obligation, in return for a suitable asset. It need not be by way of a temporary loan ; he may take long term war loan stock, since he holds a certain amount of investments among his assets, and at a pinch he can add to this holding. But the credits which bankers are prepared to grant are limited by the necessity of holding an adequate reserve of legal tender money. If additional credits are created, prices will tend to rise and in particular the prices of foreign currencies ; the foreign exchanges will become unfavourable and gold will be exported, while more money will be needed for internal circulation. In time of peace the remedy for both tendencies would be found in a high rate of interest, but we have supposed that all that is practicable in the direction of a contraction of credit has already been done. The indispensable condition of further assistance from the bankers to the Government is that they should be secured against the consequences of this drain of money. This can only be effected by a suspension first of the limits placed upon the note issue in relation to the gold reserve, and then, if need be, of the convertibility of the notes into gold.

Here then we see how a Government at war may be compelled to supersede the most wisely framed currency system. The fear of this catastrophe is perhaps the chief motive which leads Governments to accumulate vast reserves of gold in time of peace. It was after the Agadir crisis of 1911 that the German Government deliberately set out through the instrumentality of the Reichsbank to make a large increase in the country's holding of gold. France responded by making a large increase in the already very great reserve of the Bank of France. Both countries were certainly actuated mainly by a fear of war. The greater the gold reserve the longer the credit system can stand the strain of financing the Government without suspending specie payments, or, if specie payments are formally suspended but gold continues to be exported, without letting the paper currency fall to a discount.

The methods of granting credits to the Government

differ under different systems. In the first place, the great central banks may make advances direct to the Government. In France a sum of no less than 23 milliards of francs has been so advanced by the Bank of France since the beginning of the war. The Imperial Bank of Russia had advanced 15 milliards of roubles to the Government by the time of the Bolshevik outbreak in November, 1917. The Austro-Hungarian Bank has made advances to the two Governments of 33 milliards of crowns. This system is not without its dangers. The notes or deposits of the central bank are held by the other banks as their cash reserves, and a material increase in them, permitting an increase in these reserves, may produce an unnecessarily great extension of credit and a heavier depreciation of the monetary unit than the situation really calls for. In a country like France or Germany, where the legal tender notes are themselves very largely used as the means of payment in large business transactions, and bank credits play a less important part, this consideration may not be of great moment. In England, on the contrary, a large increase in the deposits at the Bank of England is very dangerous. If the Bank makes an advance to the Government, so long as that advance remains outstanding it swells the assets and consequently the liabilities of the Bank. The Government quickly pays away the credits so granted to it, and they pass into the hands of people with accounts at other banks. In the books of the Bank of England the credits are transferred to these other banks, who find their "cash in hand and at the Bank of England" correspondingly increased. The deposits at the Bank of England cannot be diminished again unless its assets are diminished. Unless the banks are to be given the opportunity of extending credits in proportion to their increased reserves, the assets of the Bank of England must accordingly be reduced, either by a contraction of advances to private traders, or by a loss of gold or by the repayment of part of the advances to the Government. Therefore while the Bank of England frequently makes temporary advances to the Government, in time of peace as well as in time of war, it is found advisable to make arrangements for

an early repayment of such advances. For the first few months of the war the London money market was kept in a somewhat unsound condition. Apart from any temporary advances made by the Bank to the Government, the Bank was loaded up with large advances made to the acceptors of bills, who could not recover the sums destined for the payment of the bills in consequence of the war. Eventually the Government relieved the Bank and the market by assuming the direct liability for these advances, which in any case it had guaranteed from the beginning.

If the temporary advances are not obtained from the central bank, they must be provided by the other banks. Only banks can provide them. Any other agency must either draw upon funds already available, which *ex hypothesi* have been exhausted, or must have recourse to the banks for the means of lending. The Government may either approach the banks direct or may enter the market along with other temporary borrowers. There are some advantages in approaching the banks direct, since they can make arrangements with their eyes open. The banks can agree with the Government as to what policy they shall follow with their customers, how they can best exercise influence in the direction of restricting private credits, what steps the Government should take to increase the supply of legal tender money. If all these measures are wisely concerted, the expansion of credit consequent on the demands of the Government can be kept, if not under control, at any rate under observation. On the other hand, if the Government enters the short loan market by the ordinary paths, the automatic adjustment which follows may be more effective than the most elaborately devised plan of control. If the market is left to itself, and is not led to expect too easy an extension of paper issues, the contraction of private credits may well be more effective than if the bankers are in a position to stipulate for terms on behalf of their customers across a conference table. But then the Government must pay whatever rate of interest may be requisite to yield the sum which it needs. Moreover an appeal to a free market for temporary as for long-term loans may fail to yield the sum desired on

any terms, and in that event a direct arrangement with the banks is the only resource left. If the Government appeals to the banks direct, it may ask, as has already been pointed out, not for temporary advances, but for subscriptions to a long-term loan. The long-term loan appears to put the Government in a more secure position, since there is then no need to bargain with the banks for recurrent renewals, but unless the disposition of the banks is doubtful the difference is very much one of form. The essential characteristic of these arrangements is the financing of war by the *creation* of bank credits instead of by the surrender to the Government of part of the people's spending power.

The consumers' income may be divided into two portions, that which is derived from war work and Government work of all kinds, and the remainder which is still derived from the production of non-warlike commodities and services. The consumers' outlay may be similarly divided into one portion which is paid in taxes or invested in war loans, and the balance which is spent on consumption. The individual consumer may, of course, receive the whole of his income from war work, or the whole from non-war work, but his outlay will be divided between contributions by loan or tax to the Government and expenditure on himself. The expenditure of the Government may exceed its receipts from taxes and loans by (1) the value of commodities that can be taken from stock towards satisfying the consumers' outlay ; and (2) the additions the public are willing to make to their unspent balances of credit or paper money. When Government expenditure goes beyond this limit, when the recipients of the sums it spends spend them in their turn, and there results a greater depletion of stocks than is economically practicable, the effect is that stocks begin to be replenished, not from home production, which is *ex hypothesi* already strained to the utmost, but from abroad. There is an excess of imports and an unfavourable exchange. It should be observed that the unfavourable exchange is the result not of the additional credits in themselves, but of the additional expenditure by the consumer. In so far as the people into whose hands the credits are paid away by the Government

abstain from spending those credits on themselves, but either accumulate them in balances or else subscribe them to war loans, there is no tendency to attract additional imports or to divert potential exports to the home market. Even when people spend the credits on themselves, so far as the demand is met from stocks, the foreign trade balance is not affected. A cushion of stocks is interposed to take the thrust of demand off the foreign trade commodities. It is only when these mitigating circumstances have lost their efficacy that the balance of trade becomes adverse, and the unfavourable exchanges demand an export of gold. In time of peace the remedial effects of an export of gold result chiefly from the proportionate contraction of credit which is forced upon the banks. In the case we are considering there is no room for a contraction of credit, except in so far as the assets and therefore the liabilities of the banks are diminished by the value of the actual gold withdrawn. So long as gold is paid out freely for credits on demand, a depreciation of the monetary unit, as measured by the foreign exchanges, will be staved off. As soon as gold payments stop, the depreciation will begin. A country which uses gold coin in actual circulation will in such circumstances quickly lose it. A premium on foreign exchange will soon make a withdrawal of gold from circulation for export profitable, and the banks into which the coin in circulation is being continually paid can easily withdraw it and pay their own obligations in paper, provided a sufficient supply of legal tender paper be issued. Should there be no sufficient supply of legal tender paper, the foreign drain of gold will soon leave the banks without the means of discharging their obligations. Even if the bankers do not collect gold coin for export, others will do so as soon as there is an appreciable profit to be realised. Consequently the only alternative to the issue of paper is an immediate suspension of payments *by the banks*; bank credits themselves would become irredeemable (as they have done more than once in financial crises in America), and the banks would charge a premium on the payment of their own obligations in legal tender. A complete divorce of all bank credits from any tangible,

standard of value is very dangerous, and unlimited paper issues remain as the only practicable resource.

Faced with these problems, a Government has to decide whether to pay out its gold reserve freely to the end, or whether to stop short and keep some gold in hand. The former course will keep the exchanges up while the gold lasts, but will leave the country with less favourable prospects of resuming specie payments when it is exhausted ; the latter will start the depreciation of the monetary standard as soon as the gold payments stop, but the gold remaining in reserve will facilitate the resumption of specie payments, when this is decided on, and may even help the country's credit abroad. At the outbreak of war in 1914 all the belligerents, except England, suspended specie payments, although all had very large gold reserves. England, however, had still larger *potential* gold reserves in her command over the foreign exchange market, in her large gold circulation, and in the large gold production of the British Empire. As time went on, it was found that the world-wide extent of the war itself facilitated the maintenance of gold payments in London. The general suspension of specie payments in the belligerent powers of Europe so narrowed the area in which gold continued to circulate, that the British exports of gold to the United States and the other countries which still constituted that area, bore a very considerable proportion to their pre-existing stock of gold, and stimulated in them a corresponding expansion of credit. Their monetary units were consequently cheapened practically as fast as the British pound sterling, and the great expansion of credit necessitated by war finance in this country could be carried out without depressing the foreign exchanges at any rate below the rather artificial export specie points corresponding to the great difficulties in the way of moving gold in time of war.

Since the famous report of the Bullion Committee in 1810, which investigated the reasons for the "high price of bullion," or in other words the depreciation of the Bank of England notes, during the restriction of specie payments by the Bank, it has been generally recognised that the depreciation of paper

money may be measured by the foreign exchanges, and also that beyond a certain point the adverse movement of the foreign exchanges cannot be adequately explained by an unfavourable balance of trade, but necessarily implies a depreciation of the standard. The relation of the foreign exchanges, both to the balance of trade and to the value of the monetary unit, we investigated in Chapter IV. The conclusions we then reached are as valid in war as in peace. The unfavourable balance of trade in time of war is primarily the result of borrowing from abroad, either direct, through the floating of loans in foreign countries, or indirect, through the diversion to war loans of money that would otherwise have been sent abroad for investment, through the attraction of foreign savings to replace money that would otherwise have been invested at home, and through the sale of securities abroad. But for the expansion of credit, this borrowing from abroad would produce not an unfavourable but a *favourable* movement of the exchanges, until the attraction of imports and repulsion of exports had produced an additional balance of imports equivalent to the proceeds of the foreign loans. It is only if there is an expansion of credit *more* than sufficient to make a market for the additional imports that the exchanges become unfavourable. In that case, so long as the gold value of the monetary unit is maintained, the excessive circulation of credit attracts an *excessive* balance of imports, more, that is, than the foreign loans will cover, and the consequent excess of payments due abroad results in a drain of gold. When the gold is exhausted, or gold payments are stopped, the gold value of the monetary unit is no longer maintained. The market gives the unit such value as will keep down the imports to what the exports and the foreign loans, etc., will pay for. The imports to be paid for take various forms. The Government may borrow abroad the means of paying for supplies which it purchases abroad. That is a self-contained transaction, and is more or less outside the ordinary operations of the market. The Government may of course purchase supplies abroad, merely because it can get them a little cheaper or a little better than at home, and in that case it is acting like any other purchaser;

the supplies so purchased, like any other imports, are a consequence of the high prices in the home market. But often foreign supplies are purchased without much regard to price, because, even when all the available resources are drawn upon at home, additional supplies will give a better prospect of success in the war. Moreover it is likely enough that the prices of warlike supplies at home are so artificially regulated that they hardly constitute a market at all.

There is a nearer approach to normal market conditions where contractors who have undertaken to furnish warlike supplies find it necessary to buy part of their materials, etc., abroad. The credits raised by the Government and paid to these contractors give them the means of payment out of which the foreign supplies are to be purchased. Here the demand of the Government as a buyer operates directly to make a market for imports. And where the supplies are produced at home, the remuneration of the people engaged on production, including the profits of the contractors and the interest of the capitalists as well as wages and salaries, is paid from the Government credits, and, in so far as the receipts of these people are spent on consumption in excess of what home production can satisfy, commodities have to be imported.

Now finance is the art of providing the means of payment. The means of payment will only be fruitful in so far as there is something to be paid for. It is not possible to provide supplies for a great war by juggling with bank credits. A country at war must endeavour to produce more and consume less. Its spending power for the purposes of the war is limited to the excess of production over consumption, *plus* any surplus stocks that can be drawn upon, *plus* any wealth that it can raise from abroad, by borrowing or by the sale of commodities or securities. There is some difficulty in completely adapting to war production the productive resources previously applied to the production of superfluous non-warlike commodities, but of course goods may still be produced for export, and imports suitable to the new national needs may be obtained in return. The unfavourable foreign exchanges, the loss of gold, the depreciation of the monetary unit, these are signs that the

country is consuming more than it can pay for by its production, by borrowing abroad, or by selling its possessions. So long as all the money raised and spent by the Government represents the equivalent of something of value surrendered by the people from whom it is raised, these adverse signs will not appear. The problem of "financing imports" is then completely solved. Whether the solution be to borrow more abroad, or to produce more or consume less at home, solved it is. It is when the Government raises credits which represent nothing but a cross entry in its books of account with its own subjects that inflation begins. As soon as gold payments are suspended and the creation of redundant credits proceeds without limit, the prices of commodities begin to rise indefinitely. The consumers' income in any week is drawn, as we have seen, partly from the credits granted to the Government, partly from the ordinary trade credits. The consumers' income proceeding from the latter source corresponds to the consumption of non-warlike commodities; that proceeding from the former source corresponds to the war expenditure of the Government. An increase in war expenditure increases the consumers' income, and if the consumers devote their increased purchasing power to their own consumption this means that an increased money demand is applied to a limited output of commodities. If the values were still based on gold, a rise of prices would attract increased imports; now, however, it only makes the exchanges more unfavourable. The whole increase in the consumers' outlay therefore exhausts itself in raising prices. As prices rise, or, in other words, as the value of the monetary unit falls, both branches of the consumers' income; that derived from Government credits and that derived from trade credits, rise in proportion, for a greater quantity of credit is needed to finance a given output of commodities, warlike or non-warlike. And of course the unspent balances also tend to rise; that is to say, a part of the credit paid out remains unexpended.

The mere fact that the bankers who grant credits have sufficient assets to cover them, perhaps several times over, does not prevent the credits from being redundant. It is only

in so far as the credits give command over wealth which can be applied to the purposes for which it is needed, over labour, over supplies of food, over weapons and ships and rolling stock, over the services of soldiers and sailors, over the *use* of suitable fixed capital, that they are more than a mere financial conjuring trick. The same is true of contributions by private individuals to war loans and even to taxes, in so far as the contributors raise the necessary funds by borrowing and do not take adequate steps for repaying the sums borrowed. All the new money available for investment comes ultimately from savings out of income. Money once invested is spent, and though the title to the interest or dividends yielded from the investment may be sold, and the seller can put the price which he receives into a new investment, that does not release the labour and capital expended. The patriotism of shareholders cannot transform a tramcar into a howitzer or a cinema theatre into the boots of an army corps. Fixed capital is fixed, and its adaptability for use in war is limited. In so far as it is adaptable, the Government may take it; the Government may requisition the ships of a shipping company and the shareholders may invest the cash they receive in war loan. They abstain from spending the cash on themselves. Or again capital assets which are not adaptable may yet be sold abroad, and the proceeds placed directly or indirectly at the disposal of the Government, increasing thereby the country's power over foreign resources. But even this is subject to the limit that only that part of the foreign resources which can be utilised for the production of warlike supplies or for releasing domestic resources that can be so utilised, is available. It is primarily foreign savings from *income* that can be so utilised. An attempt to spend sums greater than the amount of wealth which the world offers to be purchased can only inflate prices.

Up to the declaration of war between Germany and the United States in April, 1917, the problem of war finance presented itself to this country above all as the problem of financing imports. In order to make full use of the great advantage conferred by the command of the sea, it was necessary to make lavish purchases in neutral countries and especially in

the United States. The limit of those purchases was to be found nowhere short of the power of the United States to produce what was required and the possibility of transporting it to Europe. How were those supplies to be paid for? The receipts of the Government normally took the form of credits in London. The American manufacturers wanted credits in their own country. If they had been willing to be paid with holdings in British war loans no difficulty would have arisen. But some of them, at least, wanted to be free to spend the sums received as they pleased, and even those who were willing to invest them outside their own businesses wanted investments in their own country, paying interest and principal in their own currency. The British Government accordingly resorted to three principal measures for providing the means of payment. In the first place, vast quantities of gold were sent, gold displaced from circulation by the new currency notes issued in England, gold freshly mined from within the British Empire, gold sent by France and Russia, gold which had come in a great stream from the United States after the outbreak of war when the exchanges were all in favour of London.¹ The gold received by the United States from all these sources in two years was something like £200,000,000. Next, a number of loans were floated chiefly by England, but also by some of her Allies, in the United States, the interest and principal being payable in the United States in dollars. Thirdly, special arrangements were made for handing over British-held American securities to the Government, which could either buy them and sell them in America, or borrow them and pledge them as security for American loans.

In essence what happened was that Great Britain became indebted to the United States for the value of the supplies furnished, and had to find equivalent assets, in gold or securities to pay the debt. The problem was quite accurately described as that of paying for our imports. At the same time this problem was really inseparable from that of paying for

¹ The gold sent from the United States was not sent across the Atlantic but was deposited to the credit of the Bank of England at Ottawa, whence it was sent back when the exchange turned in favour of the United States. —

all our supplies. If the amount of genuine money raised at home was more than sufficient to pay for the warlike supplies purchased at home, that meant that the home consumer was abstaining from spending so much money on himself, and that an equivalent amount of the country's productive resources were set free for the production of goods for export. If, on the other hand, complete provision had been made for paying for all the warlike supplies purchased abroad, but nevertheless the home purchases were financed with inflated credits, the exchanges would be adverse. The excessive amount of purchasing power in the hands of the people would make a disproportionately attractive market for foreign goods (or securities), so long as the monetary unit remained at its nominal par. In fact, in that case, the inflation of credit, by financing the war with less than the due amount of sacrifice on the part of the people, actually attracts superfluous imports; the problem is then not so much to finance the imports, as to avoid attracting them. The solution is to be found not in borrowing more money abroad, but in encouraging or enforcing abstinence at home. An alternative solution, and one of considerable practical importance, is to excite a corresponding inflation in foreign countries. In a war between two powers only in a neutral world this is hardly possible, but when the greater part of the world was involved in the war, some degree of sympathetic credit inflation almost inevitably occurred in a neutral area so much narrowed. The United States could not digest £200,000,000 of gold in two years, without being involved in an enormous expansion of credit, even if it were somewhat less than in proportion to the increase of some 60 per cent, so effected in the country's stock of gold. This expansion of credit tended to attract goods from the European to the United States market and to counteract the effect of the European inflation on the exchanges.

The flood of gold indeed caused some misgivings both in the United States and in other gold-using countries. The three Scandinavian countries, Norway, Sweden and Denmark, and later Spain, actually suspended the free coinage of gold,

and their banks of issue were no longer legally bound to grant credits in exchange for gold at a fixed price.

For Germany the problem of financing imports can hardly be said to have arisen at all. From the beginning of the war she was cut off from all opportunity of gaining any appreciable amount of material assistance from neutral resources. For all that, however, the problem of paying for supplies arose for her in an acute form. In appearance her war finance, with regularly recurrent half-yearly war loans, has been remarkably systematic. At the outbreak of war a series of emergency measures were put into operation. Gold payments were suspended; various measures of relief to debtors were put into force; an organisation was created for making advances to traders on every kind of tolerable security and a special issue of paper money was made as a medium for these advances. In the first instance, no new taxes were imposed and nothing was done to sustain the foreign exchanges. It was in appearance a system of war finance without sacrifice. The gold standard was deliberately discarded in favour of unlimited paper, without any prior effort, by contracting credit and paying out gold, to retain it as long as possible. No doubt it was calculated that the ample issues of paper would provide the people with the means of subscribing liberally to the war loans, the first of which was brought out within two months. When credit expands, it is profits which gain the advantage in the first instance; wages are only raised after an interval. So long as wages lag behind, the effect is to make the rich richer and the poor poorer. Now it is much easier for the Government to extract money from the rich, either by taxation or by borrowing, than from the poor. A restriction of expenditure which is child's play to the rich may be a terrible burden to the poor. Sacrifice can be forced on the poor by means of high prices accompanied by no proportional increase of wages. From the money thus filched from the poor the rich, cut off from alternative channels of investment, can be induced to subscribe to war loans. In fact, the German system, far from being one of war finance without sacrifice, put the sacrifice upon the poorest people. Moreover the rich

evidently failed to play their part. Though they subscribed many milliards of marks to the war loans, the depreciation of the mark, as measured by the neutral exchanges in Europe showed clearly that these milliards were partly fictitious credits, that they did not all represent real wealth. It may be supposed that the weak point of the system was the absence of any adequate scheme of war taxation. Sound war finance depends on abstinence, and abstinence cannot be enforced except by taxation.

Of course it is not to be imagined that every nation which has to finance a war invariably exhausts all the methods of sound finance before having recourse to methods of inflation. There are plenty of examples in history of undisguised inflation effected by direct issues of legal tender Government notes without the intervention of any banking system. This was the character of the assignats issued during the French Revolution. In the American Civil War there were both Government notes (or "Greenbacks") and notes issued by the National Banks established under the Act of 1863. These latter were allowed to issue notes against United States bonds, so that all the National Bank notes issued represented an equal amount of money lent for the purposes of the war. The currency notes issued in this country since the outbreak of war are similar, but they are issued only as the small change of credit. Like subsidiary silver, they are issued in such quantities as the banks may need, and their existence favours inflation inasmuch as it removes the limitation which the need to maintain an adequate supply of gold coin would otherwise impose. But inflation can only result in so far as the control of the creation of credit is relaxed, and consequently the issue of these notes in reality only plays a secondary part in the process.

CHAPTER XV.

THE ASSIGNATS.

WE have now brought our subject to a point at which it can be better elucidated by concrete historical examples than by further theoretical analysis. In the present chapter and the next we shall describe two examples of the effects of war finance upon currency. Thereafter we shall devote three chapters to illustrating the various problems arising out of a *change* of standard, problems which are of great practical importance and on which we have as yet hardly touched. This will be followed in Chapter XX. by a brief discussion of the similar problems which are being stored up for the future under the stress of war finance. In Chapter XXI., returning to theory, we shall draw some general conclusions.

The nearest parallel to the great war of our own day is to be found in the wars of the French Revolution and Empire. Somewhat less concentrated and more intermittent, those wars shared with it nevertheless the terrible characteristics of economic ruthlessness and world-wide extent. The economic protagonists were France and England. For both, the economic strain made itself apparent in grave currency difficulties. In the case of France these difficulties belonged chiefly to the early years of the war. The assignats have taken their place in history as the classical example of paper money made worthless by over-issue. After their final collapse in 1796 French finance reverted perforce to a metallic basis, and so remained till 1815.¹ In England the currency difficulties began just when those of France ended. The restriction of cash payments by the Bank of England occurred

¹ The Bank of France had to suspend cash payments more than once, but in those days its circulation played a modest part in the business of the country. Far the greater part of transactions were in specie.

on the 27th February, 1797, and continued throughout the war, ending only in 1819, four years after the conclusion of peace.

The issue of the French assignats was not in the first instance a war measure at all. The immediate occasion of the Revolution was the financial impasse in which the Government found itself. Minister after minister had failed to devise a way out; the deficit grew; and it was above all the exemption of the aristocracy and the church from taxation that obstructed every attempt to balance the budget. When therefore the *Etats Généraux* met in 1789 it was their special mission to find the means of averting bankruptcy, and even in the enthusiasm of the creation of a new polity this pressing duty could not be evaded. Privilege fell. But the unpopular taxes were repealed, and the disorder and loss of confidence paralysed the taxes that remained. In its disinterested enthusiasm the *Assemblée Constituante* voted compensation for vested interests in many of the feudal dues and other limitations on liberty which it abolished, and the hoped-for balance of the budget seemed further off than ever. Necker, the Minister of Finance, attempted to borrow, but his loans were little more than half subscribed.

The provision of the immediate means of payment became urgently necessary. In the confiscated lands of the king and the clergy the State had become possessed of an asset more than sufficient to meet the accumulated deficits of many years. The *biens nationaux* are believed to have been worth 3500 millions of *livres*,¹ while the whole expenditure of the budget was some 500 or 600 millions, and the deficit for 1789 was estimated at 140 millions. Here was a guarantee of solvency, but the problem was to make it immediately available. A succession of forced sales would sacrifice a great part of its value. In December, 1789, the Assembly decided to issue a series of notes or "assignats" of 1000 *livres* each, bearing interest at 5 per cent., to be accepted from purchasers in payment for the *biens nationaux*. These notes were part of the

¹ The *livre* was almost the exact equivalent of the *franc* which took its place in 1803, so that £1 = 25 *livres*.

floating debt; not being legal tender they were not paper money. The first legal tender issue was decreed in April, 1790, the amount authorised being 400 millions, part of which, however, was to be applied in payment of the Government debt to the Caisse d'Escompte and the withdrawal of the notes of that institution (which had been made inconvertible and legal tender). These assignats bore interest at 3 per cent.; they were for sums of 200, 300, and 1000 livres. From the very beginning they circulated at a discount of about 5 per cent. In September, 1790, a further issue of 800 millions was decreed, this time without interest. This issue was *mere* currency, and the old issue was put on the same footing, interest on it ceasing in October. The total authorised issue was thus 1200 millions, but meanwhile the *biens nationaux* were being sold, and the assignats received for them were all burnt. The discount, however, rose to 10 per cent. Necker had estimated the total stock of metallic currency in France a few years before at 2200 millions, and at first sight it seems surprising that a paper circulation of something less than 1200 millions should fall so substantially below par. Memories of John Law's debauch of paper money in 1720, and distrust of the new system of government may have contributed to the depreciation. But the principal cause of it seems to have been the relatively large denomination of the assignats. The minimum of 200 livres had not been retained in the issue of September, 1790, but even so the smallest assignats were for 50 livres, and there were comparatively few of these. So long as assignats were not issued in sums convenient for the payment of wages, their sphere was very restricted, and it is only natural that when issued to an amount equal to more than half the entire monetary supply of the country, they should fall to a discount. In the first months of 1791 great difficulty was felt from the scarcity of small change. Even assignats of 50 livres were at a premium compared with those for larger sums. In May, the discount being then 15 per cent., an issue of 100 millions in assignats of 5 livres was authorised in replacement of an equal amount of those of larger denominations. There was an immediate rush for these 5-livre notes,

and speculation quickly raised them to a premium. Perhaps if the substitution of small notes for large had been continued so long as the demand lasted, and no fresh issues of large assignats had been made, the whole issue might have recovered. But by a decree of 28th June a further issue of 600 millions had been approved, and these soon began to pass into circulation. In the period of two years and two months from the 1st May, 1789, to the 1st July, 1791, the public expenditure had amounted to 1719 millions, of which no more than 470 millions had been met from revenue. The deficit was thus some 1250 millions, and it was growing day by day. To meet this deficit there was no resource but paper money.

No pretence was any longer made of setting a final limit upon the circulation. Each successive decree prescribed a limit, but there was no expectation that the limit would continue in operation and no surprise when it had to be raised. In November, 1791, the assignat was still worth 82 per cent. of its face value,¹ but the ever-growing inflation, aggravated by the approach of war, rapidly depressed it. War was declared on Austria in April, 1792. In June the assignat fell to 57. By the beginning of August a net circulation of 2000 millions (after the deduction of assignats withdrawn) was authorised, and assignats of 50, 25, 15, and 10 sous were now being issued. In September, however, there was a recovery. In August the monarchy fell. September saw the September massacres, the meeting of the Convention, the declaration of the Republic, the ignominious retreat of the Prussians from Valmy. In that crowded month the assignat stood at 72, the same figure as in January, and remained at approximately that level till the end of the year. Was this a sign of reviving confidence? A final break with the monarchy and all its subterfuges and vacillations, and the establishment of a Government of undivided Republican sympathies may have seemed a great gain, but the danger of anarchy must have weighed heavily on the

¹ The Schedule to the Law of 5 Messidor, An V, (23rd June, 1797), giving the average value of 100 livres assignats in specie for each month, is quoted in Courtois' "Histoire de la Banque de France, etc."

other side. It seems more probable that the fall in the summer was overdone. It was a speculative movement, which the economic as distinguished from the political conditions did not justify. The year 1792 was one of great credit expansion, of which the trade activity in England was clear evidence, and the consequent fall in the value of gold or rise in the prices of commodities would be reflected in a rise in the value of a paper currency which did not itself participate in the expansion. This is an example of a very frequent phenomenon, the relief of inflation in one country through the occurrence of a credit expansion in another. But such was the flood of new paper in France that the reaction from the English market could only delay the fall; it could not on balance produce an actual rise beyond the level marked at the beginning of the year.

In January, 1793, Louis XVI. was guillotined, and war was declared on England. The spell of prosperous trade in England ended in a sudden and disastrous crisis. The foreign exchanges turned violently in favour of London, but none more so than that on Paris. The exchange on Paris had been keeping pace approximately with the value of the assignats; as gold was wanted primarily for export, and was therefore more valuable in London than in Paris, there was generally a greater premium on exchange than on louis d'or. In December, 1792, the 100 livres in assignats were worth 72 in coin. The exchange on London averaged in November 19 $\frac{1}{2}$ d. and in December 18 $\frac{1}{2}$ d. As the par was 28 $\frac{3}{4}$ d. to the écu of 3 livres, the assignats were worth 68.3 and 64.6 per cent. of their par value in terms of sterling in those two months. In January, 1793, the assignat fell to 51, and the exchange to 16d. After violent fluctuations values seemed to collapse altogether. The average for June was 36 and for August 22. The exchange in June was 9 $\frac{7}{16}$ d. and in August 6 $\frac{1}{2}$ d. Indeed momentarily on the 2nd of August the exchange was only 4 $\frac{1}{4}$ d. or hardly 15 per cent. of its par value. So serious a depreciation called out for a remedy. Free dealing in the precious metals made the persistent decline in value painfully evident, and a decree of the 11th April prohibited the buying of gold or silver at a premium and provided that all monetary obliga-

tions were to be obligations to pay in assignats ; if payment were made in coin it must be at par. But it was impossible to improve the dog's temper by wagging his tail, and the premium on specie rose apace.

But the depreciation of August, 1793, though mild compared with what was to follow a year or two later, was again little more than a speculative vagary. This was the great crisis of the Revolution. The peril of new enemies arising on every frontier, the destitute condition of the armies, the treason of the generals, the outbreak of civil war, the paralysis of a new and untried Constitution based on a systematic weakening of the executive, combined to menace the new régime. Love of their country no less than love of their liberties impelled the French to rally to those leaders who were ready to dare everything. The Jacobins were installed with absolute power in the Committee of Public Safety ; the Constitutional Party, the Girondins, who were the embodiment of the revolutionary virtues, but were too timid or too moderate for so desperate a crisis, were thrown into prison, soon to be butchered in the first of that demoniac tale of judicial murders which we call the Reign of Terror. The assignats, the legal status of which depended absolutely on the Revolution, suffered in value from the dangers that threatened the country and the Government. The premium on gold and silver could no longer be openly quoted indeed, and the fall in the foreign exchanges was a matter of little practical moment to a country which was at war with nearly the whole of Europe. But one consequence of depreciation could not be ignored. An indefinite rise in the prices of the necessaries of life occasioned acute distress and discontent and called for a remedy. In the spring of 1793 the Jacobin opposition had pressed upon the reluctant Girondin Government a measure prescribing a maximum price for corn, and when the Jacobins themselves came into power the principle was extended by successive decrees to all necessaries, including not only food, but cloth, leather, fuel, wood, etc. (Decree of 29th September, 1793).

The Jacobins saw clearly enough that if order was to be restored in the finances the volume of paper money in circula-

tion must be reduced. The assignats remaining in circulation, after deducting those withdrawn through sales of *biens nationaux*, now came to 3776 millions. Three measures were relied on to reduce this total. The *assignats à effigie royale*, issued before the fall of the monarchy, were believed to be in the hands of royalist sympathisers, and those above 100 livres, to a total value of 558 millions, were demonetised. They lost their legal tender character, but were to be accepted for a period in payment of arrears of taxation or of the purchase price of the *biens nationaux*. The arrears of taxation, amounting to from 500 to 700 millions, were to be collected. And a forced loan, assessed on income, was to be levied, and was calculated to yield 1000 millions. There was no hope of the ordinary budget balancing, but with these resources the plethora of paper might at any rate be reduced.

In August the law of April enforcing the use of assignats as the means of payment was strengthened. It became an offence to sell coin, or to differentiate between coin and assignats in any transaction, or to refuse payment in assignats, or to negotiate assignats at a discount. By a decree of the 8th September the death penalty itself was imposed.

Here was a forced currency indeed. At some periods of the world's history such crude expedients have been rightly derided by economists as being unenforceable and ineffective. But France, in return for her fearful sacrifice in submitting to the Terror, received at any rate the advantages of a strong Government, a Government which could organise victory and save the Republic, a Government which could make realities of a forced loan, a schedule of maximum prices, or a legal tender law. Economic or uneconomic regulations might be evaded or ignored under the Gironde and afterwards under the Directorate, but under the Terror even economic regulations were not to be trifled with. The prospects of France and the prospects of the Revolution rose. In November, 1793, the assignat was at 33, or 50 per cent. above the panic quotations of August. In December it leapt up to 48. Thiers states that it even rose to par, and at any rate it may have been appreciably above 48, which was the average quotation for the

month. Like the low level of August this rise was in part artificial. Gold and silver themselves were depressed in value in consequence of a law against hoarding ; hidden treasure was liable to be confiscated, half to the Government and half to the informer. Specie and foreign balances were alike needed by the Government for the purchase of supplies abroad, an important requirement in spite of all the interference of the war with commercial intercourse.

The Government exacted a part of the taxes not in assignats but in kind. Other supplies were requisitioned at prescribed prices. Not merely were war supplies requisitioned, but the people of Paris were fed with requisitioned corn. Yet notwithstanding all the requisitions and transactions in kind a vast expenditure in money was necessary. The emergency measures themselves destroyed enterprise ; there were no free markets except for luxuries, and it was no time for luxuries. The ordinary sources of revenue were almost dried up. The administration of the all-important *Impôt Foncier* was unwisely devolved on local authorities who had no interest in gathering it in. The deficit was made up by incessant additions to the authorised issue of assignats. Speaking on the 4th November, 1794, Cambon, the Minister of Finance, estimated that the expenditure in 1792 had been 1800 millions, and in 1793, 2000 millions, and that it had risen to 300 millions a month. At that time the assignats in circulation amounted to 6400 millions, and they were still worth 24 per cent. of their nominal value.

At last there came a relief of the tension ; the circle of enemies was triumphantly broken ; it was no longer necessary to subordinate every private interest to the absolute will of the Executive. The Terror, in fact, perished of its own success. Victory brought security, and the remoter the danger the more odious became the butcheries perpetrated by the bitter fanaticism of Robespierre and the vindictive brutality of his evil colleagues. With the fall of Robespierre on the 9th Thermidor (July, 1794), the Terror ceased, but the military, economic and political system of the Committee of Public Safety did not immediately come to an end. .

So far as the economic system is concerned, the first important step was the repeal of the law of the maximum on the 24th December, 1794. Maximum prices have a paralysing effect on trade. No one is willing to sell, and goods have to be wrenched from the dealers' hands and forced into the market by the Government. Let the limitation of price be withdrawn, and every one is willing at once to resume business. But there is no recent experience by which to measure demand, and the result is a bewildering uncertainty of prices and an orgy of speculation.

This is what happened in France in 1795. Even in September, 1794, three months before the actual repeal of the law, there were complaints that the maximum was no longer enforced.¹ At the same time it was said that there were goods in plenty.² Once people saw that the maximum simply prevented them from buying, and that if they could evade the law they could have whatever they could pay for, the system was doomed. But the repeal let loose forces the effects of which had not been foreseen. Traders who had been paid in assignats for all that they had been compelled to sell for eighteen months past, and had been unable to buy anything because no one would sell at the maximum prices, pressed forward to spend all this idle money on replenishing their stocks. In proportion as traders hastened to spend, prices went soaring upwards, and in proportion as prices rose, traders became the more eager to turn money into commodities, and to reap the profit of the almost unlimited rise which they foresaw. This sudden dissipation of balances flooded the market with assignats, and produced a headlong depreciation.³

And this depreciation now became directly measurable against specie. For a time indeed the prohibition upon dealings in specie remained legally in force. But even before the repeal of the maximum speculators were beginning to sell

¹ Aulard, "Paris sous la Réaction Thermidorienne," i., 91. This work, containing the daily reports of the Paris police on the state of public opinion, etc., together with extracts from the newspapers, provides invaluable material for studying the successive phases of the assignats.

² Aulard, i., 239 and 253.

gold and silver as "nankin" or "muslin," and the police were unable to prevent the traffic.¹ With the repeal of the maximum there came a decree of 2nd January, 1795, permitting the exportation of specie, provided products necessary to life were imported in exchange. This did not authorise dealings in specie at a premium, but it opened the door to the quotation of specie prices. Once coin had become the legally recognised means of purchasing foreign commodities, its place as a measure of value was re-established, and almost immediately we find evidence here and there that the law against differential prices is being defied, and payment in coin stipulated for. This is still the exception in Paris itself, but it is fast becoming the rule in the country districts, even quite close to Paris.²

Till the end of February, 1795, the depreciation though continuous was not perceptibly accelerated. Indeed whereas the assignats fell from 28 per cent. in October to 20 in December, they were still at 17 in February. Nevertheless this was the lowest point yet recorded, and represented a drop of one-half since the fall of Robespierre seven months before. There had not been so severe a decline since that of the summer of 1793. The Convention turned their attention seriously to the problem at the end of February. Cambon, the Minister of Finance, proposed a lottery on a gigantic scale, and a number of other projects were discussed, all being designed for the purpose of raising a large sum of money in assignats and withdrawing the paper so received from circulation. The principle was the same as that of the forced loan of 1793, but the magic of decision was gone. The various plans were referred to the Committee on Finance, and while the Committee deliberated, the collapse of the assignat went on apace. By April, when the Committee's spokesman, Johannot, presented its report, the paper money was worth little more than 10 per cent. of its face value. The report embodied a variety of proposals. Its general tendency was towards greater freedom. Bargains were to be permitted in any medium of payment, whether metal or paper; the Bourses

¹ Aulard, I, 272.

² *Ibid.*, I, 420, 480, 490.

in Paris and elsewhere were to be opened ; the value of silver bullion in assignats was to be officially, ascertained and published monthly. A final batch of 3200 millions in assignats was to be manufactured, not to be immediately issued but to be held in reserve, and thereupon the plates were to be once and for all destroyed. The *biens nationaux* were to be paid for in assignats at their silver value. A land bank was to be started, to issue a new kind of security, *cédules d'hypothèque*, secured on specified portions of the *biens nationaux*, not legal tender, but transferable by endorsement, and bearing interest at 3 per cent.

An important instalment of these proposals was passed on the 25th April. Specie was declared to be "merchandise". The Bourses were opened. The 3200 millions of assignats were authorised (though the plates were not destroyed and the issue was far from being final !)

The discussion was resumed in May. A member named Raffron put forward a motion that the value of the assignats should fall automatically by 1 per cent. every month. This aroused a storm among the Jacobins, and a resolution ruling out of order any proposal in the direction of demonetising the assignats was carried by acclamation. Perhaps Raffron's motion was not meant too seriously and the real aim was to outmanœuvre the proposal for fixing the value of the assignats in silver according to the market quotations. For this latter proposal, which certainly partook of demonetisation inasmuch as it divorced the assignats from the money of account, and set no limit to their possible divergence, was not further discussed.

The growing turbulence of the Jacobin faction broke out into open violence in the latter part of May, and the discussion on the Johannot report was interrupted. On the 21st May, in the midst of the turmoil, according to a brief notice in the *Moniteur*, the law declaring specie to be merchandise was again repealed.

Quiet being restored, the discussions on currency and finance were resumed. On the 4th June, a law was passed authorising the system of *cédules d'hypothèque*. The same law

declared that assignats and coin bearing the stamp of the Republic were the sole legal money. The effect of the various decrees relating to specie is not very easy to unravel. For some reason or other the hasty repeal of the law which made specie merchandise, on the 21st May, seems never to have had any operative effect. At any rate the dealings in gold and silver on the Bourse were in no wise interfered with, and when a law was passed at the end of August giving the Bourses in Paris and elsewhere a monopoly of dealings in the precious metals, "soit monnayés, soit en barre, en lingot ou ouvrés," there was no suggestion that transactions not otherwise lawful were being legalised. Finally, on the 12th March, 1796, the *Moniteur* again records that "the law which declared gold and silver merchandise was repealed". It is possible that the law of the 4th June, which recognised no other metallic money than that coined by the Republic, was interpreted as legalising dealings in *louis d'or* and *écus* of the old régime, and in bullion and foreign coin. The Republican coinage included no gold and very little silver (only 32,000,000 francs up to May, 1797), and if that alone was not to be treated as merchandise the continuance of free dealings in other forms of specie is explained.

The *cédules d'hypothèque* were a failure. Indeed what was the use of expecting people to lend with the prospect of being repaid in assignats? No proposal for borrowing from the public could succeed so long as the lenders had no safeguard against an indefinite depreciation of the medium in which they were entitled to repayment. When the proposal for fixing the value of the assignat in silver every month was dropped this part of the Johannot report lost all its utility.

But in any case it was too late. The critical months had already been lost. The assignat which had been worth one-sixth of its value when Cambon made his report in February, and one-tenth when Johannot made his in April, was now hardly worth one-fifteenth, and was fluctuating wildly and falling rapidly. The Jacobins, however, remained the champions of the paper money which had saved the Republic. The Convention turned to the public lands which had always

been regarded as the security for the assignats. All that was needed to rehabilitate them was to make them convertible on demand into this security. But it could not be said that the holder of a sum in assignats was entitled to any definite amount of land. Hitherto the lands had been sold by auction, and the price rose as the assignats depreciated. No limit could be set to this process, and to sell the land to the highest bidder was undeniably to give less land than had been originally contemplated. The valuation of 1790 afforded a basis for fixing the price of the land, and a decree (29th May) was passed that it should be sold to the first comer at seventy-five years' purchase of the annual value of 1790, or, say, three times its capital value. The Church and Crown lands seized in 1789 had been worth 3500 millions; the lands of the *émigrés* seized in 1792 were worth 2000 more.¹ The sales up to date amounted to 3600 millions in *paper* (of which about two-thirds still remained to be paid up). Allowance being made for the inflation of paper values, the portion unsold might have been sufficient to withdraw many milliards of redundant assignats. But at the then value of the assignat the land was being sold at only three years' purchase, or thereabouts, of its real annual value, and for all that the obligations of the State were not being unequivocally met. The Jacobins could not stand such a sacrifice of the Republic's most cherished asset. The decree was hastily repealed, and the sales under it were annulled (7th June). This game of fast and loose was not calculated to revive the credit of the assignat. On the 7th June the *louis* of 24 *livres* was quoted at 585. On the 13th it leaped up to 1000, on the 15th it dropped to 600, and on the 16th even to 450. The position was becoming desperate. How could paper money subject to such wild vagaries be used as a medium of payment at all?

One of the vices of the situation was that the public revenues dwindled in proportion to the assignats. It had been difficult enough to collect the taxes and the arrears were enormous, but when the assignat was worth only 5, 4, or even 2 per cent. of its nominal value the money was hardly worth

¹ Storck, "Finances de l'ancien Régime et de la Révolution," chap. xii.

collecting. In June an act was passed making the assignats pass in payment of taxes for a reduced value bearing the same proportion to their face value as a standard sum of 2000 millions to the actual amount in circulation (rounded down to the nearest 500 millions). To avoid inflicting hardship on landlords who had to pay taxes on property which they had let on lease, the same rule was applied to rents payable under leases.

Nothing could demonstrate better than the operation of the proportional scale the manner in which the assignat had lost ground. It was estimated that in 1789 there had been 2000 millions of specie and 700 millions of paper in circulation. Some of the specie had undoubtedly remained hidden in the country all through the Terror, notwithstanding the law against hoarding. If the gap to be filled by the assignats in the currency system be taken at 2000 millions, then the 6400 millions in circulation in November, 1794, which were worth 1500 millions at 24 per cent. of their face value, nearly sufficed to fill it. At the time of Johannot's report in April there were about 8000 millions in circulation, which at 10 per cent. represented only 800 millions in specie. In June there were 13,000 millions in circulation and the average value of the assignat for the month was only 3·38 per cent., so that the whole issue was worth no more than 440 millions.

While the Convention had been debating, and referring bills back to Committees, and passing and repealing futile decrees, the assignat had practically ceased to be a medium of payment, and had become a mere object of speculation. Country people expressed their contempt for the assignats, calling them "*l'argent de Paris*".¹ The Paris shopkeepers themselves refused to give change for the assignats of large denomination or sometimes even to accept them at all, on the ground that the country people were refusing to take payment in paper for their produce.² The Convention remained in existence till the end of October, but during its last months its attention was occupied in Constitution-making and in pre-

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¹ Aulard, 1st July, 1795.² *Ibid.*, 20th June, 1795.

paring for the advent of the new Government. Currency matters were allowed to drift and the credit of the assignats was not assisted either by the grant of extra pay in metallic value to the troops or by the computation of the legislators' allowances in terms of corn. The premium on specie grew, now rapidly, now slowly; occasionally there was a momentary set back, but never for long. By the beginning of September the high quotation of 1000, which the *louis* had touched during the spasmodic movements of June, had been surpassed. After remaining at 1100 to 1200 for several weeks, the *louis* shot upwards in the middle of October. The Republic was changing horses while crossing a very torrential stream, and in the last days before the new constitution, with its *Directoire Exécutif* and its *Corps Légitif* of two Chambers, came into operation, quotations oscillated madly up and down. On the 26th October 2000 was reached, on the 28th 2750, on the 29th 3450, on the 30th the *louis* opened at 2600, rose again to 3450, and closed at 3150, and on the 31st it was back again at 2450.¹ The paper money in circulation had grown to 19,000 millions, and with the *louis* at 3000 this was equivalent to only 150 millions of specie.

Writers on the assignats have made much of the amazing prices at which commodities were bought and sold at this period. Of these it is really enough to say that they were proportional to the rise in the value of specie. In other words they were fifty-fold their normal level in September, a hundred-fold and more by the beginning of November. These prices were a reality in Paris, and in other places where Government disbursements kept up a perpetual fresh supply of assignats. In Paris the assignat, "*l'argent de Paris*," really was the medium of payment. But even in Paris a system was growing up of regulating prices of goods by the price of gold as quoted on the Bourse.² From fixing differential prices, the merchants and farmers in the provinces had taken to refusing to receive assignats at all. The country was steadily restocking itself with metal currency. The quotations of the foreign exchanges on the Bourse, from the time when they begin in the late summer,

¹ See daily Bourse quotations in the "Moniteur"; ² Aulard, vol. ii., p. 470.

consistently show an enormous profit on the importation of gold. The premium on *louis d'or*, and on foreign gold coin was very much greater than the premium on foreign bills. In September and October the difference was as great as 20 per cent. ; till the end of January, 1796, it was as much as 10 per cent.¹

When the Directorate came into power at the beginning of November, they turned their attention to the currency. On the 6th December they made their first important proposal. There was to be a forced loan, payable in specie or bullion or corn or in assignats taken at *one per cent.* of their face value, by which it was hoped to raise 400 millions in specie, and to withdraw 20,000 millions (counting as 200 millions) in assignats. The assignats were to become convertible into coin at the same rate of 1 per cent. ; the manufacture of assignats was to be brought once and for all to an end ; the plates were to be destroyed on the 19th February. But meanwhile the Government could not be left without any financial resource whatever, and they were authorised to continue the manufacture of assignats till the total issue reached the fantastic figure of 40,000 millions. Great hopes were aroused, and, when the forced loan decree passed, the *louis*, which had been above 5000, fell in two days to 3500. The régime of the assignats was clearly coming to its close. The Government was indeed still meeting its liabilities in assignats. Civil Service salaries, however, had already been raised thirty-fold (28th November). In December it was enacted that half the Customs duties should be paid in coin. The valuation of the assignat at 1 per cent. might well provide a bridge by which the Government could return, as private traders had already practically returned, to a metallic standard.

But the Directorate was limited in its freedom by a legislature predominantly Jacobin. It did not command confidence. The assignats were still over-valued, even at 1 per cent., and the Government could not start redeeming them in specie at that rate. Indeed practically no specie came into its hands.

¹ For the serious effect of this on English currency, see next chapter, p. 262.

A continuance of paper money in some form seemed absolutely inevitable, and the next step was to devise a new issue of paper money, which should be absolutely secured against depreciation. The assignats, though they were supposed to be secured upon the public lands, did not entitle the bearer to any particular share in this security. The new notes, the "*mandats territoriaux*" (16th March, 1795), were to entitle the bearer to obtain land *on demand* at the fixed valuation of twenty-two years' purchase of the annual value of 1790 (or eighteen years' purchase for buildings). Though there are plenty of objections to such a currency system, it may be plausibly argued that, so long as the supply of lands remained unexhausted, depreciation would have been prevented. But it was never given a fair trial. The Committee of the lower Chamber (the Council of Five Hundred) introduced an amendment making assignats convertible into *mandats territoriaux* at one-thirtieth of their nominal value, and raising the amount of the mandats from 600 to 2400 millions to provide for the exchange (with an ample margin!). If one-hundredth had been too high a valuation of the assignat, one-thirtieth was impossible. The *louis* fell, it is true, from 7000 to 5300 in one day and to 4800 in one day more, but it soon reacted to about 6000. If it was to be valued in mandats at 720, there would merely be a repetition of the fiasco of June, 1795, when the Convention, unable to stand the sale of the *biens nationaux* at two or three years' purchase, had annulled the sales retrospectively.

To add to the distrust, the new currency when it came out consisted not of mandats but of "*promesses de mandats*" (authorised 19th March). "Rescripts," or Government promises to pay cash, were already in circulation at an enormous discount, and promises to pay mandats could not be expected to fare better. Week after week, month after month, people wondered when the mandats proper were coming. The *promesses* were given forced currency and could be used to pay the first deposit for the purchase of land, but apparently the Government could not summon up courage to assume the liability to pay land *on demand*. Meanwhile the quotations of the mandats fell and fell. At the beginning of

April they were worth no more than 20 per cent, at the end of April only 10, at the end of May they fell to 5, recovered to 10 in June, and fell away in July even below 5. Though they were given forced currency, and gold and silver were declared no longer "merchandise," the mandats never gained the same acceptance as the assignats. Whereas the *louis d'or* was quoted in assignats on the Bourse, it was never quoted in mandats; the mandats were quoted in terms of specie, as if they were themselves "merchandise". The assignats, while they lasted, really were the basis of the money of account; as fast as they lost ground the metallic standard took their place, and a new network of debts and accounts, reckoned in coin, came into being. The mandats were intended, like any ordinary issue of paper money, to take the place of coin, but no trader who cared for his business would take advantage of the law (23rd March) which made stipulations for payment otherwise than in mandats unenforceable in the Courts. There remained for the time being two moneys of account, one following specie and the other the assignats, the two being linked together by the daily quotation of the *louis d'or*. But even the fixed thirty to one relation between the mandats and the assignats never led to the use of a third money of account following the mandats.

In currency questions the money of account is fundamental. The difference between high and low prices is in itself one of nomenclature only; it only acquires importance through the relation of prices to pre-existing debts. Even rates of wages, the observed tendency of which to lag behind price movements is one of the most serious evils of inflation, are only a particular case of debts reckoned in the money of account. The contract of service creates a debt every day from employer to employed, and the amount of the debt can only be adjusted to a change in the purchasing power of the monetary unit by a revision of the contract. It is worthy of remark that so long as the Paris workmen were ordinarily paid in assignats, there were no complaints of unemployment; the high prices (always attributed to the knavery of speculators) were the perpetual grievance. Early in 1796 when the assignats had almost

entirely given way to specie, unemployment becomes one of the chief grounds of discontent. But if wage contracts were not easily adapted to a monetary unit which depreciated by half every two or three months, commercial contracts were thrown into a worse chaos still.

The Convention had not been able to evade this question altogether. In August, 1795, an emergency law was passed suspending the right of redeeming or commuting annual payments, and prohibiting debtors from paying up before the due date. The winding up of the assignats in February, 1796, necessitated some sort of equitable adjustment of contracts. If the mandats were to be equal to specie, and debts were to be payable in this new medium, an utterly unfair burden would be placed on those who had contracted during the depreciation to pay in assignats. If a man had contracted in December, 1795, to pay 10,000 livres in assignats, then worth about 50 livres in cash, was he to pay 10,000 livres in mandats three months afterwards? If he was allowed to pay less, what was to be paid by the man who had contracted in December, 1794, when the 10,000 livres were worth 2000, or in December, 1793, when they were worth 4800? A law was passed, soon after that authorising the issue of the mandats, establishing a statutory scale of depreciation. Every debt was to be adjusted according to the rate appropriate to the date at which it was contracted. This was in principle a concession to debtors, and by way of some compensation to the creditors the scale did not at any point allow the full degree of depreciation which had actually prevailed. Thus in March, 1795, the prescribed rate was 40 per cent., and the actual value of the assignat no more than 13·28. After January, 1796, it was 2 per cent., and the actual value of the assignat only about $\frac{1}{2}$ per cent.

The collapse of the *promesses de mandats* raised the same problem in an almost more acute form, since the fall to 4 per cent. was accomplished in only four months. In July it was decided that the mandat should thenceforward be accepted even by the Government only at its market-value, which was to be periodically announced officially.* At last a law of the 4th February, 1797, demonetised all the paper money remaining*

in circulation, and permitted the mandats to be received in payment of taxes and of instalments on the purchase of the public lands at 1 per cent. of their nominal value.¹

The adjustment of debts was not finally provided for till the law of the 6th October, 1797, which enacted that obligations incurred between the 1st January, 1791, and the 29th Messidor IV (17th July, 1796) should be reduced to their value in metal, according to a table of depreciation scheduled to the law. This differed from the law passed in March, 1796, when the assignats were wound up, in that it took the metallic value, and no more, as the basis of the debt.

One effect of the failure of the *promesses de mandats* was that a large quantity of assignats remained in circulation. Apparently the amount in circulation at any one time never actually reached the authorised maximum of 40 milliards. The highest is said to have been 32 milliards. The result of the forced loan was disappointing; up to January, 1797, only 64 milliards had been received.² A considerable proportion of the assignats ought, therefore, to have been exchanged for *promesses de mandats* at the ratio of 30 to 1. But there was no profit in doing this, and much of the issue remained outstanding till the general demonetisation of paper money in February, 1797.

The end of the mandats was the end of the Revolutionary paper money. But that did not mean that the Government paid cash. Contractors received "ordonnances," the holders of rentes received two-thirds of their capital in "bons des deux tiers mobilisés," and interest on the remaining third in "bons d'arrérages," requisitions for the army were paid for in "bons de réquisitions". All these were obligations to pay in cash, but obligations with no definite date of maturity. Sometimes by corrupt means the holders could get them paid on grounds of "urgency". Sometimes they had to wait. Like the assignats and mandats these instruments could be used in payment for the *bien national*. Like them they depreciated (though not quite to the same extent). But there was one vital difference; they were not legal tender. Contracts were

¹ *Stourm*, ii., p. 327.

² *Ibid.*, ii., p. 384.

made exclusively in metallic money, and the vagaries of Government finance no longer deranged the money of account. Thus was the way prepared, amid all the financial humiliations of the Directorate, for the sound system inaugurated by Napoleon.

Much has been written of the fallacies inherent in the issue of the assignats. They were supposed to be "based" on the public lands, but were not, in fact, convertible into land or anything else of value. There was no definite relation between the total value of the public lands and the total amount of the circulating medium which the French people needed. In reality the sale of a capital asset like land is as much limited as the issue of loans in its power of attracting *bona fide* savings from the public. The failure of Necker's loans in 1789 proved that surplus savings were not available, the ordinary revenues were drying up, and inflation was the sole resource remaining for providing the means of payment.

While the history of the assignats illustrates almost every possible phase in the abuse of paper money, the period of their decline is in some ways the most interesting and instructive. It is almost unique as an instance of the currency of a great nation gradually fading away into nothing. It is really astonishing that the agony should have been so prolonged. How did it come about that when the assignat fell in four months from 17 per cent. to 3.38 per cent. of its value people still went on using it? The Government of course insisted on paying the paper, but how was it that people were induced to accept it (apart from the unfortunate *rentiers*, who had no choice)? Probably the explanation is that some people were willing to speculate on the Government being induced to do something to save the assignats. The Jacobins always remained faithful to the currency of the Revolution. Ordinary political leaders are fairly free to change their minds, and nobody blames them much for dropping a policy for which they have striven in the past. But a faction which has enforced its policy by bloodshed cannot so easily disavow its past. To admit that all or any of the causes for which 20,000 men and women were done to death were wrong is to assume too great,

a burden of guilt. The Jacobin leaders probably did not like being called "drinkers of blood" by their opponents, and this was an unpleasantly effective political cry. To retain their self-respect they were impelled to contend that what they had done had been really necessary, that the measures taken during the Terror had saved the Republic, and that any evils that had followed were due rather to the weakness of their successors than to their own errors. From the obduracy so thrust upon them sprang that loyalty of the Jacobins to the assignats which gave hope to the speculators. The *rentiers*, contractors, Government servants, and others who were paid in assignats would not keep them longer than necessary; even a week's delay might cause a perceptible loss. On the Bourse and at the bucket shops of the *Jardin Egalité* those who were in haste to rid themselves of this tainted paper could deal with the speculators who were prepared to buy it up on the chance of political favours from the Jacobins. The outcry against speculators was incessant and intense. But it was only the speculators who gave any support at all to the assignats when everyone else was discrediting them by spending them the moment they were received.

The Jacobins made more than one effort to justify the speculators' hopes. The ephemeral decree of June, 1795, for the sale of lands at seventy-five years' purchase of the value of 1790 was one example; the exchange of assignats for mandats at the ratio of 1 to 30 was another.

We have seen how the aggregate metallic value of the assignats in circulation shrank. From 1500 millions in November, 1794, it had dwindled a year later to 150 millions, and at the end was hardly 100 millions. Even of this reduced total the greater part had probably by that time found its way into speculative holdings, so that the quantity kept for currency purposes must have been very small.

CHAPTER XVI.

THE BANK RESTRICTION OF 1797.

THE currency difficulties in England differed completely from those of France, occurring as they did in a highly-developed credit system which had already been adapted to finance a great mercantile and industrial organisation, and the continuity of which was disturbed by no revolutionary outbreaks. In the preceding generation, to the credit facilities provided by the Bank of England for the great London merchants, there had been added a network of country banks providing similar facilities all over provincial England. These banks, like the Bank of England, issued notes. They also received deposits, but cheques had not yet come into such general use as to make a deposit on current account a convenient medium of payment. This extension of banking was naturally not exempt from those disagreeable evidences of the instability of credit, periodical financial crises. One such crisis had occurred in 1783, and after an interval of ten years credit was in a state of dangerous inflation when the outbreak of war, with the consequent revision of values, in January, 1793, precipitated another. At that time Bank of England notes did not circulate to any great extent far from London, but the country banks held part of their reserves either in Bank of England notes or in deposits kept with London Banks. There were no bank-notes below £5 and (till 1795) no Bank of England notes below £10. There was very little silver coin, and for the all-important purpose of the payment of wages and for retail purchases gold coin (guineas, half-guineas, and seven-shilling pieces) was indispensable, and the characteristic of a crisis was always an urgent demand upon the Bank of England for gold to be sent out to the provinces. The usury laws, limiting

interest to 5 per cent., were a serious obstacle to an efficient control of credit. In 1793 the Bank of England endeavoured to cope with the crisis by restricting credit; it refused to lend. The natural result followed: solvent firms were threatened with failure. The Government intervened and obtained statutory powers to make advances to merchants. The advances were not made in cash, which the Government could only have obtained from the Bank itself, but in exchequer bills. The merchant, embarrassed with a stock of commodities on which no banker would lend, was thus provided with a security which he could get discounted. Having gained the power of borrowing he could afford to see his cash balances fall, and the demand for guineas was relaxed. In the end the whole amount of £3,855,000 advanced by the Government was repaid by the borrowers.

At the beginning of the war there was no appreciable financial strain on the Government. The financial year in those days ended in October. In the year 1792-93, which included eight months of war, little was borrowed, and in 1793-94 only about 10 millions (the revenue being about 18 to 19 millions). It was in the course of 1794-95 that the difficulties began. In that year the deficit met by borrowing was 20 millions, besides a guaranteed loan of £4,600,000 raised for the benefit of Austria, and in the following year it was necessary to borrow 25 millions. In those days such loans put a severe strain on the national resources. From time to time Pitt was compelled to ask for advances from the Bank. The Bank was prepared to go a long way to accommodate the Government, as it had done before in time of war. But in the spring of 1795 the foreign exchanges showed an ominously unfavourable tendency. The practice prevailed of financing the forces abroad by means of bills drawn on the Paymaster-General or the Treasurer of the Navy, and payable at the Bank of England. When the bills arrived the Bank was expected to provide the money to pay them, and statutory authority had recently been obtained for the advances made by it for this purpose. The perpetual arrival of new bills, for the payment of which the Government had made no separate

THE BANK RESTRICTION OF 1797 . 257

provision, was the cause of growing misgiving to the Bank, and led the Directors to make repeated protests to Pitt—protests which grew in urgency as the foreign exchanges became more adverse. The Directors urged him to keep down the advances for the purpose of meeting these bills to a maximum of £500,000 outstanding at any one time. In practice this was an ideal never attained: at times they exceeded £2,000,000.

At that period the most important of the London exchanges were those on Hamburg and Lisbon. Lisbon was important because most of the new supply of gold came from the mines of Brazil and travelled *via* Portugal. Hamburg was important as being the great *entrepôt* for the trade of Northern Europe. In normal times the exchange on Paris was quite as important, but though war did not necessarily interrupt the quotation of the exchanges between the belligerents (and indeed the Paris exchange was regularly quoted in London from 1803 to 1815), this exchange was not quoted between October, 1793, and April, 1802.

Germany and the other countries of which Hamburg was the commercial centre had silver currencies, and the Bank of Hamburg only gave credit for silver, gold being bought in the Hamburg market as a commodity. There was, therefore, no real par of exchange with London. For the purpose of quotations there was an assumed par price of gold, six "marks banco" (or 96 stivers) to the gold ducat. This price, making the ratio of gold to silver 14.86 to 1, had become too low. In 1795 the ratio had reached that of 15 $\frac{1}{2}$ to 1, instituted in the French coinage by Calonne ten years before. The London exchange was quoted in schillings and grotes, banco, to the pound sterling (a schilling of 12 grotes being 6 stivers, or $\frac{1}{2}$ mark banco). At 96 stivers to the ducat, the gold in £1 was worth 34 : 3 $\frac{1}{2}$, banco. At the ratio of 15 $\frac{1}{2}$ it was worth 35 : 9. Allowing for interest for 2 $\frac{1}{2}$ months, a bill on Hamburg was at par when the exchange was about 36. In the years 1795 and 1796 the *lowest* price of gold quoted in Hamburg was 98 $\frac{1}{2}$ stivers, making the par 35. In the first quarter of 1795 the exchange averaged 35 : 7; in the second

quarter it had fallen to 33 : 10 $\frac{1}{2}$, and in the third it was no more than 32 : 5 $\frac{1}{2}$. In October the Lisbon exchange, of which the par was 67 $\frac{1}{2}$ d. to the milreis, rose to 71 $\frac{1}{2}$, representing nearly as great a depreciation of sterling as in Hamburg.

At last, in self-defence, the Directors of the Bank, recognising that the needs of the Government must remain paramount, decided that they must restrict trade discounts, and on 31st December, 1795, they adopted a resolution limiting the total amount of bills to be discounted each day for their customers other than the Government. If on any day the bills presented for discount in the aggregate exceeded the limit laid down, a proportion of the bills presented by each applicant were to be returned on his hands. Apart from the advances to the Government, this Procrustean reduction of discounts gave the Bank complete control over credit, and at the same time the advances to the Government (of which the obnoxious advances on Treasury bills in reality formed quite a moderate proportion) were themselves steadily reduced. Having exceeded £12,000,000 in December, 1795, they were reduced to less than £9,000,000 in September, 1796. But it was not till October, 1796, that the foreign exchanges were restored, and even then the Bank was not relieved from the drain of gold. At last in February, 1797, the signs of a crisis appeared. An invasion scare precipitated it, and the gold stock of the Bank, already seriously depleted by the strain of the preceding two years,¹ began to melt away. The Government came to the conclusion that the Bank could not stand the strain, and they obtained an Act of Parliament stopping the payment of its notes in cash.

It might, perhaps, be thought that this crisis bears its explanation on its face. Did not the Bank Directors go to the root of the matter when they pressed Pitt again and again to keep down his demands for temporary advances? No doubt they were right in attaching so much importance to this, but a glance at the actual variations which occurred in these advances will show that the explanation of the crisis is not to be

¹ It had been 6 $\frac{1}{2}$ millions in August, 1794; 2 $\frac{1}{2}$ millions in December, 1796; and fell to 1 $\frac{1}{2}$ millions on 25th February, 1797.

found in them: In 1793, the first year of the war, they averaged a little over £9,000,000. In 1794 they were lower, the average being about £7,500,000. At the beginning of 1795 they rose quickly and exceeded £11,000,000, and, except for a temporary rise to £12,800,000 in December, 1795, they varied between £8,700,000 and £11,500,000 until the suspension of cash payments in February, 1797. At the moment of the crisis the advances were £10,600,000. Now in 1791 and 1792, under peace conditions, the advances had exceeded £9,000,000, and it is perfectly obvious that they could be increased to 11 or 12 millions in time of war without threatening a financial cataclysm. Indeed, while the Bank Directors were right to insist on the limitation of advances, it may fairly be contended that Pitt in substance complied with their demands. Though the inconvenient bills drawn abroad were constantly above the stipulated limit of £500,000, the advances as a whole were not excessive.

But what specially agitated the Bank Directors at the time was that so large a part of the money raised by the Government was spent abroad, either on subsidies to our allies or on the maintenance of our own forces. The amount so spent in 1794 was £8,336,000, in 1795 (besides a guaranteed loan of £4,600,000 for the Austrian Emperor) £11,040,000, and in 1796, £10,650,000. Undeniably these large remittances would have an unfavourable effect on the exchanges. But it must be remembered that this effect would be no greater than that of the investment of the same amount abroad in peace time. And any curtailing of the amounts annually invested or lent abroad, and any additional sums borrowed abroad during the war, must be set off against it. The operations of 1794 do not seem to have had much effect on the exchanges, which did not become seriously unfavourable till the spring of 1795. The large remittances of that year must, of course, have been an important contributory cause of the drain of specie that then set in. But so long as war expenditure is financed with genuine money, provided by a diminution of private expenditure, and not with inflated bank credits, the effect of even large remittances abroad will be moderate.

Sir Francis Baring, writing in 1797, stated that the war loan of 1796 had been taken by subscribers of insufficient financial standing, who "had recourse to circulations, operations on foreign places, and other expedients to enable them to make good their payments, which produced some effect on the course of exchange, but still more on the rate of interest in the country, which was soon pushed beyond what is allowed by law to be received". In so far as loans were raised from people who could not pay for them without borrowing, there would, of course, be a tendency towards unsound conditions. But if the subscribers succeeded in obtaining credits abroad, as Sir F. Baring suggested, the effect on the exchanges would be *favourable*—at any rate, so long as the foreign credits were not called in. And in any case the disturbance of the exchanges occurred long before the war loan of 1796 was issued.

The critics of the Bank blamed the Directors for restricting discounts. The Bank restricted discounts in order to keep down its note issue. Some of the witnesses before the Secret Committee of the House of Lords, appointed immediately after the crisis, argued that the demand for guineas was due to this cause. Trade must have some means of payment; bank-notes will do, but if they are not forthcoming the only alternative is to ask for guineas. The country banks, it was said, restricted their issues in sympathy with the Bank of England, and hence the drain of gold. This argument is palpably wrong. The guineas were drawn out in exchange for bank-notes. It is true that a curtailment of borrowing facilities leads traders to hold larger balances, but those balances may just as well be in credit as in money. The demand for gold in exchange for credit must have been due to one or all of three causes—a need for gold for export, a need for gold as a means of small payments, especially payments of wages, or a loss of confidence in the banks. A loss of confidence in some of the country banks there may well have been; failures among them were frequent enough. Bank of England notes did not circulate much outside London, and such loss of confidence in the local banks would probably lead to a demand

for guineas. But this loss of confidence itself calls for explanation.

Why, then, should the banks have been in difficulties? Why should gold have been exported? Why should guineas have been in demand for internal circulation? No petty little movements will be enough to explain so great a crisis.

The fact is that the financial situation in England, even in 1797, cannot be adequately studied in isolation from the financial situation on the Continent. For the first two years of the war the foreign exchanges were highly favourable to London. This was the period of the Terror in France, when the assignats were forced into circulation by all the rigours of the Committee of Public Safety, when the possession of a hidden hoard of gold or silver was a criminal offence, when everyone who had wealth in France was anxious to send it abroad. The countries adjacent to France were soon saturated with specie, and England got her share, as is shown by the exceptionally heavy purchases of foreign gold for the Mint in 1793 and 1794. The total for these two years was 3½ millions, as compared with a normal average of about £650,000 a year. And, of course, more foreign gold was imported than was brought to the Mint.

The fall in the exchanges began in the spring of 1795. The exchange on Hamburg, which was above 36 at the end of March, fell in six weeks to 33 : 6, and in August to 31 : 10. Even at 33 : 6 it was already profitable to send specie thither, and in August it was profitable also to send it to Lisbon. This is just the time at which France was returning to a metallic currency. The Law of the Maximum, the foundation of the whole system of assignats under the Terror, was repealed on 24th December, 1794. In January, 1795, a difference began to be made (contrary to law) between specie prices and paper prices, and soon there followed ever-growing complaints that farmers or merchants, first of all in the provinces and afterwards in Paris, refused to accept assignats at all. The laws limiting dealings in gold and silver were partly abrogated, partly ignored. By the end of the year the hopelessly discredited assignat had become an object of speculation rather

than a means of payment. In the course of 1796 the Revolutionary paper-money was practically demonetised. In July, 1796, it was stated that specie, though scarce, was sufficient to meet the requirements of the markets, and specie prices were beginning to rise.

How intense was the pressure to send gold to France during this period of return to a metallic currency is proved by the quotations of the foreign exchanges on the Paris Bourse. For the period from 23rd August, 1795, to 22nd February, 1796 (except for an interval from 14th December, 1795, to 13th January, 1796, when the Bourse was closed), the pages of the *Moniteur* give us an almost complete series of daily quotations of the prices of gold and silver and of the exchange on Hamburg and some other places. The following table shows the monthly averages. The assignat being then in its death-agony, and valued at only a small fraction of its face value, each quotation is given at *so many times* the par value:—

	French Gold Coin.	Foreign Gold Coin.	Hamburg Exchange.	Premium on Gold over Exchange.
• Aug., 1795	40·83	40·85	39·30	3·9 per cent.
Sept. "	47·94	47·99	39·82	20·4 " "
Oct. "	73·83	76·05	62·54	21·6 " "
Nov. "	129·83	—	117·88	10·1 " "
Dec. "	172·85	—	156·97	10·1 " "
Jan., 1796	218·99	—	197·31	11·0 " "
Feb. "	257·42	—	244·76	5·2 " "

When it is remembered that throughout these months the Hamburg Exchange was from 8 to 10 per cent. against London, it will be seen how enormous was the profit to be made by importing guineas from London to Paris. It was possible on 20th September, for example, for a man who wanted gold coin in Paris either to buy it at 4650 livres per French ounce (472½ grains English), or to buy a bill on Hamburg at 7350 livres per 100 marks banco, to sell the bill in London for guineas at about 33 schillings (12½ marks) to the pound sterling, and to smuggle the proceeds across the Channel. As every 100 marks banco yielded more than £8 in English gold,

equivalent to 2·1 French ounces, he would get 9765 livres' worth of gold, leaving a margin of 2415 livres to pay for the cost and risk.

But to appreciate the full significance of these figures it is necessary to understand that September, 1795, was precisely the month in which the Bank of England first began to suffer a drain of specie. This was expressly stated in the Report of the Secret Committee of the Lords, and confirmatory evidence is afforded by the actual text of the repeated remonstrances submitted during the year by the Bank to Pitt. By August these remonstrances had become very grave, yet no actual reference was made to any loss of specie before the urgent warning addressed to him on 8th October, when the price of *bullion* (on which the premium in Paris was less than on coin) was stated to be £4 3s. to £4 4s. per ounce.

The demand in Hamburg and Lisbon for specie from England, which remained intense for practically a year, was merely a reflex of the demand in France. The Secret Committee of the Lords obtained from the Customs statistics of the export of gold bullion. The exports recorded in 1795 and 1796 were almost negligible. At first sight this seems to show that, whatever the intensity of the demand for gold on the Continent, England escaped with a trifling loss. But the Customs figures are really worthless. The export of guineas, or even of gold melted down from guineas, was prohibited, and though gold melted from guineas was often exported with a false declaration, it was also often exported secretly. When receiving a deputation from the Bank on 5th February, 1796, Pitt mentioned that, according to the British resident at Hamburg, a large consignment of guineas had been sent thither in the packet from Yarmouth and melted down. As the direct demand came from France, it seems probable that much of the gold was surreptitiously sent across the Channel. There would, of course, be no Customs declaration even of French gold coin so shipped to an enemy. By April, 1796, the Hamburg Exchange was no longer quite so unfavourable, though it did not rise consistently above the export specie point till the autumn. The Lisbon Exchange.

which was less important, was very adverse all through the summer of 1796, and only fell to par in October. The slow effect of the drastic contraction of discounts put into operation by the Bank in December, 1795, shows how great was the pressure to be resisted. But even when the export of gold was stopped the crisis was not over. The large additions made before the turn of the tide to the stock of gold had had the effect of stimulating and hastening the revival of trade, which was in any case likely to follow the crisis of 1793. According to Jevons' index number, prices, which had risen from a level represented by 93 in 1792 to 99 in 1793, had stopped short at 98 in 1794, and then sprang up to 117 in 1795 and 125 in 1796. Certainly a part of this sensational rise of prices was due to war conditions, which created new demands and interrupted various sources of supply, but there is no doubt at all that it was in part due to credit inflation. Though it was said that the country banks had not increased their issues to the level of 1792-93, it was recognised that a great part of the reduction which then occurred had been recovered. The sequence of events was exactly what might be expected. First an influx of gold, then an expansion of credit, then a demand for legal tender money for internal circulation; a demand which could only be supplied by guineas. But for the violent movements of gold on the Continent, the demand for guineas might have been supplied without any excessive strain on the Bank. The coincidence of the external and internal demands for gold necessitated the restriction of discounts by the Bank of England. Credit was successfully contracted, the foreign exchanges were turned in favour of London, but, as usually happens, the internal demand for guineas was not immediately stemmed. And, what was more serious, the contraction of credit meant a heavy fall of values; Jevons' index number for 1797 was only 110, a fall of 12 per cent. from that of 1796. A fall of values means the failure of merchants, and the failure of merchants means the failure of banks. Hence the loss of confidence, which accentuated the demand for guineas. But the actual number of failures in the year was not very much above the average, and was

far below the heavy total of 1793. The distrust by itself would have produced little effect but for the persistent drain of gold to which the banking system of the country had been previously exposed. When the crisis came it was appeased not by special advances of credit such as were made by means of the exchequer bills in 1793, but by the issue of Bank of England notes of small amounts (one and two pounds), such as could take the place of gold in the payment of wages and in retail transactions.

It is a curious feature of the bank restriction that the notes of the bank were not made legal tender till 1812. They were accepted by the Government in all payments, and the principal merchants and bankers formally agreed together to accept them. This was enough to establish them as the accepted means of payment, although legally they were nothing more than debts of the Bank of England, which the Bank was expressly forbidden by law to pay in legal currency. The restriction was ostensibly temporary, but was prolonged from time to time. The Peace of Amiens in 1802 did not bring it to an end, and on the renewal of war in 1803 it was enacted that the restriction should last till six months after the end of the war. In 1811 (when the controversy raised by the report of the Bullion Committee was in full swing) Lord King demanded payment from his tenants in coin as being the sole legal tender. Even then the bank-note was not immediately made legal tender, but an Act was passed forbidding any differentiation between coin and paper, so that paper, if it circulated at all, as it was bound to do in the almost complete absence of coin, could only circulate, or discharge a debt at par. This ensured that the money of account should be tied up with bank-paper and not with gold. At last in the following year the bank-note was expressly made legal tender.

After the crisis of February, 1797, the effect of the contraction of discounts, which had been in operation all through 1796, made itself felt on the internal drain as ~~it already~~ had some months before on the external drain of gold. Confidence was quickly restored, and the foreign exchanges grew more

and more favourable, the usual consequences of the contraction of credit and lowering of values in a country which has passed through a crisis.

At the time, however, it seemed paradoxical that the English crisis was hardly over, and the currency definitely established for the time being on a paper basis, before the Hamburg exchange started rising. By April it was above 36, and by August above 37. In December it touched the quite exceptional maximum of 38:5. For 1798 the average was 37:7½, and the exchange remained consistently above 37 till the spring of 1799. In the first instance, London had suffered more severely from the French demand than Germany. Notwithstanding hostilities, proximity had counted for something, and, since the adoption of the ratio of 15½ to 1 in 1785, gold was no longer undervalued in France as compared with silver. War finance weakened the Bank of England's power of resistance, and the English credit system succumbed first. But the German system did not outlast it for long. In the summer of 1799 the inevitable collapse came. There were many failures, and such was the stringency that the exchange, which had still been at 36 in June, had fallen to 32 by the beginning of October and to 30 in the following year. In May, 1800, gold began to be quoted at a premium in London, the price being £4 5s. an oz., or 9 per cent. above the Mint price of £3 17s. 10½d.

This was the beginning of the depreciation of the Bank of England note. It is not easy to find a satisfactory measure of the depreciation. Three tests may be applied: the prices of bullion and specie, the foreign exchanges, and the prices of commodities. The first is the most direct. The premium on gold measured the departure from the gold standard. But gold was needed only as the means of remittance, and as nearly all our trade was with silver-using countries, the gold market was in an artificial condition. For long periods there was no market at all. There was no quotation from March, 1802 to April, 1803, nor from October, 1805, to February, 1809. Silver is therefore a better test than gold. We have a nearly continuous series of quotations either for standard silver bars

or for Spanish dollars, or for both. The ratio of gold to silver always gravitated towards that of $15\frac{1}{2}$ adopted in France, at which the price of standard silver was 60·84d. and that of Spanish dollars 59·3d., and the premium as compared with these prices gives a fair approximation to the measure of depreciation. Silver and gold, however, being both merely the means of remittance, the market for them was practically one with the market for foreign exchange, in so far as the foreign currencies dealt in were on a specie basis. Portugal, which had been important as the channel through which Brazilian gold reached Europe, lapsed into a paper-money régime. Amsterdam after the French invasion lost much of its business as a great financial centre. There remained, as the principal exchange markets on the Continent, Hamburg and Paris. From 1802 onwards the London exchange on Paris was regularly quoted, notwithstanding the war; nor was the quotation of the London exchange on Hamburg suspended during the French occupation. But war plays havoc with specie points. In 1810 the actual cost of sending silver between London and Hamburg was estimated at from $1\frac{1}{2}$ to 2 per cent., but insurance, which in peace was about 10s. 6d. per cent., was an incalculable factor; it might be 4 per cent., or more, or less. In 1811 the average price of silver dollars in London was under 6s. an oz. For £1 it was possible to purchase $3\frac{1}{2}$ ozs., containing 3 ozs. of fine silver, which at Hamburg would be worth about 11 marks banco, or 29 schillings 4 groats. For the same year the exchange on Hamburg averaged 24 : 11, so that a profit of nearly 18 per cent. was to be made by sending silver. In some other years at about the same time the disparity, though not so great, was still substantial, the explanation being undoubtedly that Napoleon's continental system threw obstacles in the way of the transmission of silver. Contemporaneously the exchange in London on Paris was in as artificial a condition.

For these reasons the prices of the precious metals and the foreign exchanges do not give an unquestionable measure of depreciation. There remain the prices of commodities. An index number measuring the purchasing power of money is

in some respects the most perfect test of depreciation. But it does not pretend to measure the deviation from the metallic standard. And in constructing an index number we have to be content with such price records as we can get. Jevons obtained a series of index numbers from the statistics of prices collected by Tooke in his "History of Prices". These prices, of course, covered only a limited range, and index numbers do not distinguish between a rise of price due to scarcity and a rise due to currency inflation. During the latter years of the war prices were violently disturbed by the desperate economic warfare.

Jevons calculated both paper and specie prices. The actual quotations were, of course, in paper. From them he obtained the specie prices by abating the premium on gold, but unfortunately he used a table of average prices of gold given by Tooke, which was, as he himself suspected, inaccurate. The inaccuracy was more serious even than he supposed, for neither he nor the other writers who used Tooke's figures seem to have observed that they refer to the year ending 1st February, with the result that they are practically one year wrong; so that, for instance, to the year 1816, when the maximum price of gold as returned to the Committee of 1819 was £4 2s. and the average barely £4, is attributed an average of £4 13s. 6d.¹

However, the long intervals when the quotations for gold were either non-existent or nominal make it impossible to construct a table of specie prices on the basis of the price of gold alone. When both gold and silver were quoted their prices usually corresponded nearly to the prevailing ratio of 13*½*, and therefore the price of silver may be taken as a fairly

¹ In his "Thoughts and Details on the High and Low Prices" (1823) Tooke heads the table "Account of the average market price of gold . . . from February, 1800, to February, 1821, extracted from Mr. Mushet's tables," but in his "History of Prices" (vol. ii, 1838) he omits all mention either of February or of Mr. Mushet, and describes the table as "from official documents". For some reason which I have not fathomed, Mushet's tables in his "Gain and Loss to the Fundholder" (1821) do not correspond exactly with Tooke's, one of his figures differing ~~as much as~~ as 4s. and two or three others by 2s. But Mushet states quite clearly that they run from February, 1800, to February, 1821, and his examples show that he means from the year ended 1st February, 1806, to the year ended 1st February, 1821, inclusive.

THE BANK RESTRICTION OF 1797. 269

trustworthy test of specie prices. In the following table are shown the prices of gold and silver and of bills on Hamburg and Paris, expressed on a percentage basis, par in each case being £100. The last three columns show Jevons' index numbers of prices, the computed prices in silver, and the ratio of gold to silver at Hamburg:—

PERCENTAGE VALUES.

Par.	Gold.	Silver.	Exchange on Paris.	Exchange on Hamburg.	Commodities.		Ratio of Gold to Silver at Hamburg.
	£3. 17s. 10½d. per oz.	60 8d. per oz.	25·22 Fr. per £.	36s. banco per £.	Actual prices.	Specie prices (Silver).	
1797	100·0	102·6	—	98	110	107·2	15·41
1798	100·0	100·1	—	96	118	117·9	15·59
1799	—	106·7	—	103	130	121·9	15·74
1800	107·0	113·5	—	113	141	124·3	15·68
1801	109·0	117·3	—	113	153	130·5	15·46
1802	—	113·7	105·7	109	119	104·8	15·26
1803	—	111·9	102·9	105	128	114·4	15·41
1804	103·0	108·3	100·1	101	122	112·7	15·41
1805	103·0	107·4	98·8	103	136	126·7	15·79
1806	—	110·5	103·0	105	133	120·4	15·52
1807	—	110·2	103·5	104	132	119·8	15·43
1808	—	107·1	108·4	106	149	139·2	16·08
1809	—	110·4	123·3	121	161	145·8	15·96
1810	—	113·9	121·6	120	164	144·0	15·77
1811	123·9	120·7	139·1	144	147	121·8	15·53
1812	130·2	126·5	131·2	128	148	117·0	16·11
1813	136·4	136·7	128·6	130	149	109·0	16·25
1814	124·4	124·3	116·4	119	153	123·1	15·04
1815	118·7	117·5	115·6	114	132	112·3	15·26
1816	102·9	100·9	99·6	100	109	108·0	15·28
1817	102·2	104·3	102·0	102	120	115·1	15·11
1818	104·6	106·5	104·3	105	135	126·7	15·35

Notes.—The figures for gold, silver, and the foreign exchanges are based on the Appendices to the Reports of the Lords and Commons Committees on the Resumption of Cash Payments in 1819. Before 1811 the quotations for gold are spasmodic, never covering a complete calendar year, and the averages are therefore not reliable. For a number of years the figures for silver are based not on standard silver, but on dollars (with a par of 59·3d.) The ~~estimates~~ the last column are taken from Soetbeer. The foreign exchange columns give the *premium* on francs and banco money—i.e. the pars ought strictly to be given as 9·31d. to the franc, and 6d. to the banco schilling.

The statistics show a general tendency towards increasing depreciation, reaching a maximum rather before the end of the war. But this general tendency is broken by very considerable fluctuations. The maximum index number, both for paper prices and for specie prices, comes in the years 1809 and 1810. The maximum depreciation as tested by the foreign exchanges comes in 1811. As tested by the prices of gold and silver, it comes in 1813, the last complete year of war.

The depreciation begins, as we have seen, with the Hamburg crisis of 1799. It is not cured by the ephemeral Peace of Amiens. The preliminaries of peace were signed in October, 1801, when the price of standard silver was between 5s. 9d. and 5s. 11d. Upon the conclusion of the definitive treaty (25th March, 1802) it fell to an average of about 5s. 6d., recovering to 5s. 7d. at the end of the year. At its lowest, 5s. 5½d. in July, it was still 8 per cent. above par.

The renewal of war in May, 1803, saw no appreciable rise, the average for the year being 5s. 7½d., and the average for 1804 was even lower, for the mean quotation for dollars (there being no market for standard silver) was 5s. 4½d., corresponding to about 5s. 6d. for standard silver. In 1805 dollars fell to 5s. 3½d. Commodities, on the other hand, fell abruptly on the cessation of the war and rose again to a slight extent on its resumption. The interpretation of these movements is simple. The recovery on the Continent from the crisis of 1799 was easing the strain on the English paper currency, though the upward tendency of specie prices is masked by the effects of war and peace on markets and on the sources of supply. The depreciation which was caused by the stringency at Hamburg disappeared with its cause. Till 1808 the premium on silver was appreciably greater than the premium on foreign exchange, a sign that specie was flowing away from Hamburg, and that credit was recovering on the Continent. During these years the depreciation was no longer important. From 1803 till November, 1808, the exchange on Hamburg never ~~dropped~~ below 32:9, and for the most part was above 34. In August, 1808, it was above 35. By November it had fallen to 31:3. In 1809 it averaged only 29:9.

The continental blockade was already beginning, but still in a mild and incomplete form, English goods being smuggled into the Continent in large quantities through both Holland and Hamburg. English traders sought for new openings in the newly-freed commerce with Spanish America, to compensate them for the partial closure of the continental markets. After the period of caution which had just passed, there was plenty of room for credit expansion, and the growing depreciation of the Bank of England paper showed that the credit expansion in England, being free from the trammels of convertibility into specie, was outstripping that on the Continent. For the first quarter of 1810 the Hamburg exchange averaged barely 29. Then came the catastrophe. First, embarrassment arose from the disappointing results of the South American trade. Credit began to contract, and the exchange on Hamburg rose suddenly in April to 31. In July, Napoleon, seeking to complete his system of exclusion, annexed Holland; in August he imposed a prohibitive tariff on colonial products, such as had been so liberally smuggled in; in December he annexed Hamburg and Oldenburg. Partly as the inevitable reaction after the feverish activity of 1808 and 1809, partly as the result of the increased severity of the continental system, the second half of 1810 was marked by a violent financial crisis in England. Meanwhile the credit expansion abroad continued a few months longer, fostered by the exclusion of British goods and consequent protection of continental manufacturers. Europe was for the most part on a specie basis, and a more violent contraction of credit occurred there than in England. The crash came at the beginning of 1811. Failures occurred throughout Germany, Holland, and France. In England the prices of commodities as measured by Jevons' index numbers fell from 164 in 1810 to 147 in 1811. On the Continent the fall must have been far greater. The average exchange on Hamburg fell from 29:11 $\frac{1}{2}$ in 1810 to 24:11 in 1811; that on Paris from 20:73 to 18:13. The rigorous exclusion of British goods had the same adverse effect on the exchanges as a prohibitive foreign tariff, but this effect was accentuated by the extreme financial stringency at

Hamburg and elsewhere. The crisis of 1811 is the explanation of the great depreciation of the Bank of England note in that year, just as the crisis of 1799 is the explanation of the first period of depreciation. Early in 1812, even before the relaxation of the continental system, the exchanges began to be less adverse. For the first quarter of the year the Hamburg exchange averaged 27:10, and that on Paris 19.50. But the depreciation was still great. A paper currency permits of a more lenient treatment of a crisis than a metallic currency, and English traders had got off more lightly than their continental neighbours, advances being made in exchequer bills as in 1793. But the country paid the penalty in a continued redundancy of currency. For the moment this redundancy facilitated a quick and rather fictitious recovery. The creation of credit was stimulated by the crumbling of Napoleon's power and the prospect of access to European markets. But as credit expanded the depreciation of the currency again became more marked. It is true that the rates of exchange were not so adverse as in 1811, but the prices of gold and silver rose to their maxima at the end of 1813. Gold was quoted at £5 10s. and even £5 11s.; silver dollars rose to 7s. an ounce. This depreciation was a sign that the financial system of the country was overstrained. The Government securities held by the Bank of England rose from £21,165,000 in August, 1812, to £25,591,000 in August, 1813, and £34,982,000 in August, 1814. In other words, in two years nearly £14,000,000 of the war expenditure had been met by the creation of bank credits. Only peace could restore the currency, and peace was at hand. Napoleon abdicated in April, 1814. At the beginning of June the price of gold had fallen to £5. For the last six months of 1814, it averaged £4 7s. But this rise in the gold value of the pound was reflected in a fall in the money prices of commodities. The *average* level of prices for 1814 indeed was slightly higher than in 1813, but the maximum was reached early in the year and merchants who had ~~speculated on the re-opening of the continental markets~~ quickly found themselves involved in loss. The process of recuperation on the Continent after the crisis of 1811 had been delayed

by the war, which had raged on a scale never known before. As the tide of invasion closed in, first over the outer boundaries of the Napoleonic empire, then over France itself, credit operations dwindled almost to nothing. The portfolio of the Bank of France amounted at last in April, 1814, to no more than 1,715,000 francs.

With credit dried up, the continental demand for goods was in abeyance. The result was a financial crisis in England, the aftermath of that of 1810. The advances to traders, which had then relieved the situation, had really only postponed the crash. The fall of values to the continental level had been held off at the cost of a depreciation of the currency. With the peace, and the sudden changes of values which accompanied it, the crisis was renewed, and the fall in the prices of commodities, or *rise* in the value of the currency, which had been avoided before, was brought about by the widespread destruction of credit. Multitudes of country banks collapsed, so that there was an enormous decrease in the country circulation.

In March, 1815, Napoleon escaped from Elba and the renewal of war immediately caused a renewed depreciation of the bank-note. Gold which had been at £4 8s. in February reached £5 7s. in April, and was still at £5 5s. when the Battle of Waterloo practically finished the war. By September it had fallen again to £4 8s. So rapid a rise and fall must have been speculative. At any rate markets returned after the crisis to much the same state as before it. The contraction of credit in England continued. In three weeks the price of gold fell to £4 3s. (13th Oct.) and at the end of the year it was at £4 2s. Meanwhile credit was at last reviving in Europe. By October, 1816, the Bank of England was buying gold at £3 18s. 6d. It was offering this price with a view to accumulating gold for an early resumption of cash payments; if it had left the market to find its own level, gold would have been at the ~~first~~ price of £3 17s. 10½d. The Hamburg exchange touched 38; that on Paris reached 26·10. In fact ~~so~~ ^{so} drastic had been the contraction of credit in England that sterling was at a premium of 4 or 5 per cent. Gold was flowing into

the country and accumulating in the vaults of the bank. The bank actually undertook in September, 1817, to pay cash for notes issued before 1st January, 1817, and the complete resumption of cash payments seemed to be in sight. But there was a hidden source of weakness in the situation. A crisis, such as that which shook credit in England in 1814, makes the foreign exchanges favourable; the destruction of purchasing power makes a gap which has to be filled by the importation of gold. But this only lasts till credit recovers. By 1816 the recovery on the Continent from the crisis of 1811, which had been delayed by the stress of war, was in progress, while England was for the moment in the trough of the wave. As soon as credit began to recover in England also, sterling was almost bound to depreciate again. In July, 1817, gold had risen again to £4, and at the end of the year it was at £4 os. 6d. The following year, 1818, was a year of crisis on the Continent. Since 1816 credit expansion had been rapid, and the prices of commodities had risen substantially. A credit expansion is brought to an end sooner or later by a shortage of gold, or, under a bimetallic system, of gold and silver. On this occasion the shortage was caused prematurely. Not only England but Austria-Hungary, Russia, and other countries, having made excessive issues of paper during the war, were trying to return to a specie basis. England was accumulating gold; Austria-Hungary and Russia, silver. England absorbed gold as the natural sequel of a crisis and a violent contraction of credit; the others issued foreign loans and drew the proceeds in silver. None of the three succeeded in regaining a metallic standard in 1818 (though England and Austria-Hungary accomplished this soon afterwards), and this was partly because their own competition forced up the value of the precious metals in terms of commodities, and therefore also in terms of their paper currencies. With the fall in the prices of commodities there came a financial crisis, which began in France, the bi-metallic meeting-ground of the demands for gold and silver. In October, 1818, the Bank of France took measures to contract its discounts, refusing to discount any paper having more than forty-five days to run as compared with the normal ninety.

days. Early in 1819 the price of gold rose to £4 3s. and that of silver to 5s. 7d., a premium of 6½d. per cent. on the former and 10 per cent. on the latter. The exchange on Hamburg fell to 33·7 and that on Paris to 23·50. The resumption of cash payments seemed as far off as ever. Committees of both Houses of Parliament were appointed to consider what should be done. As the outcome of their investigations an Act was passed providing for resumption by gradual stages. The bank was not to pay out coin, but to give bullion in large amounts (not less than 60 ozs.) in exchange for its notes, first from 1st December, 1819, at £4 1s. an oz., then from 1st November, 1820, at £3 19s. 6d., and finally after May, 1821, at £3 17s. 10½d., the coinage price. But so far as this provision was concerned the Act was a dead letter. Before the 1st December, 1819, arrived gold had fallen naturally and easily to the coinage price. The pressure due to the crisis on the Continent was quickly over. The crisis itself was by no means as severe as that of 1811 which preceded it, or as that of 1825 which followed it, and England, after the drastic liquidation of 1814-16, found it easy to fall into step again with the European money market when the effects of the crisis had passed off.

This troubled period illustrates well the variety of causes that affect the depreciation of a paper currency. Fundamentally the depreciation was due to financial strain. The unfunded debt reached £22,000,000 before the Peace of Amiens and fell to £14,000,000 in 1802. In January, 1804, it was £24,500,000, and rose steadily to £31,700,000 in January, 1807, and £38,700,000 in January, 1808. In January, 1813, it was £45,500,000, and in January, 1814, £57,700,000. The Peninsular campaigns and the great continental coalition of 1813 and 1814 made these years the most expensive of the war. But though the exigencies of war finance compelled an over-issue, the extent of the depreciation varied widely from time to time according to world currency conditions. The original suspension in 1797 and the unforeseen set-back in 1818 were both due to the abnormal absorption of the precious metals on the Continent. The beginning of depreciation in 1800 and the acute depreciation in 1811 were due to the

financial crises of 1799 and 1811 abroad. The favourable exchanges in 1797-99 and in 1816-17 were due to crises at home, synchronising, one with a condition of inflated credit and the other with a period of recovery abroad. The depreciation in 1808-10 was due to a commercial credit expansion in England outstripping the expansion elsewhere. The depreciation in 1813-14 was due to a commercial recovery occurring in England while the recovery in Europe was still delayed by war. The continental blockade, being especially an obstruction to British exports, made the exchanges more adverse in 1810-12 than they would otherwise have been.

In the great controversy which was started by the Report of the Select Committee on the high price of bullion in 1810 insufficient account was taken of this variety of causes. The Committee accepted the quantity theory of money, and appreciated also the fact that the monetary requirements of the community might vary, so that an increase in the circulating medium might synchronise with a fall in prices and an appreciation of the currency, or *vice versa*. But neither they nor their antagonists ever grasped the very complex theory of the variations in monetary requirements. Especially did they fail to understand how rapid and how great are the changes in the value of gold and silver themselves, caused by credit movements in the countries which use metallic currencies. Even index numbers of prices do not adequately measure the changes in the value of the precious metals, since a contraction of credit diminishes the volume of transactions as well as the level of prices.

The members of the Committee and their supporters, able and enlightened as they were, did not penetrate to the bottom of the question. But for all that the report represented an important step forward in currency theory, and they had much the best of the argument. Yet in the House of Commons they found the Government against them, and not only were the resolutions moved by Francis Horner in May, 1811; embodying the Committee's conclusions, rejected, but a set of resolutions, denying all their doctrine and asserting *inter alia* that bank-notes were held in public estimation equivalent to the legal

coin of the realm, was moved and carried by Vansittart, then an unofficial supporter of the Government (shortly to become Chancellor of the Exchequer). Mortified at this defeat of pure reason, the economists mercilessly pilloried the unfortunate Vansittart, and ridiculed his preposterous resolutions.

But perhaps the Government were not quite so foolish as they seemed. The Bullion Report itself was rather a diagnosis of the disease from which the currency was suffering than a prescription for treatment. It was easy to say that the note issue must be contracted and a return made to cash payments. But what if the money for the war could not be raised? The Bank of England was the only possible underwriter of Government loans, the only certain purchaser of exchequer bills. If the Bank's power of creating credits were subjected to a limit, the last resort of the Treasury might fail. And like nearly all Governments that have to rely on inflationary finance, the Ministers of 1811 were anxious to keep up the pretence that the metallic standard was still in force. An official admission that the standard had lapsed might have militated against Government borrowings.

It may be guessed that these were the real motives of the Government, though they could not be openly avowed. Much was made of the disastrous effects of too great a contraction of credit, and of the inevitable drain of coin for subsidies to allies and foreign expenditure. The Prime Minister, Perceval, frankly admitted that the diminution of paper in circulation would make a favourable alteration in the exchange, but then, he said, it would be necessary to discontinue the exertions we were making abroad and to abandon our allies. What response could the House of Commons make to a ~~Prime~~ Minister making such an appeal at the greatest crisis of the war? Napoleon had stamped out the embers of resistance all over Europe, except in the little corner which Wellington was defending behind the lines of Torres Vedras, and the few remaining centres of rebellion in Spain. Perhaps it was this, rather than Vansittart's perverse ingenuity and laboured statistics, that guided the minds of the many members who gave silent votes against Horner's resolutions.

When the war was over, the party of pure reason came into their own. The doctrines of the Bullion Report seemed to have gained universal acceptance. No one was found to argue as in 1811 that, as guineas could not legally be melted or exported, the price of bullion, which was sought only for export, was no test of the depreciation of the bank-note. In response to an appeal from the Government party, the opponents of Peel's resolutions embodying the recommendations of the House of Lords Committee did not even challenge a division.

Traces are to be found in the debate of 1819 of the views which had led Ministers to suppress the movement towards a resumption of cash payments in the midst of the war eight years before. Castlereagh, who was in office at both periods, defended the conduct of the Bank Directors against the accusation of interested motives. He declared that they had never permitted such motives to hinder them from affording that prompt and vigorous relief, which had it not come from them he was himself utterly ignorant whence it could have proceeded. And it is significant, too, that the contribution of the Bank Directors themselves to the proposals embodied in the Committee's recommendations was a request that the Government should repay £10,000,000 of its indebtedness to the Bank. The Directors unfortunately did not share in the general change of attitude towards the teachings of the Bullion Committee, but here at any rate they showed an appreciation of the primary cause of inflation.

CHAPTER XVII.

A CHANGE OF STANDARD.

WHENEVER, in consequence of war or any other cause, the monetary unit of a country depreciates, the difficult problems arise: whether it is to be restored to its former value; if so, by what means; if not, at what new value is it to be fixed?

We have now reached a point at which questions such as these can be best approached by reference to the practical teachings of history, and this method will incidentally have the advantage of supplying illustrations of many of the theoretical principles reached in the preceding chapters.

The problems of a change in the monetary standard are not peculiar to a fully-developed credit system. They existed even when metallic currency was the only means of payment. But the introduction of credit payments modified them profoundly. The dividing line between the old conditions and the new is to be found in the seventeenth century.

In the Middle Ages the movements of specie from one country to another were caused, just as they are in modern times, by the need to discharge liabilities not covered by the balance of trade. But whereas nowadays the loss of gold is a signal for a contraction of credit, which should restore equilibrium, this resource did not then exist. If production in a country fell off, so that it had less to sell abroad, and if there were no immediate counteracting decrease of consumption, it would begin to lose its money. It is easy to say that according to economic law this loss of money ought to make the money which remained more valuable; that is to say, ought to bring about a fall of prices. But prices did not respond so easily as they do now. Not only prices but wages were often narrowly

prescribed by custom or even by law. Difficulties and delays of communication made the creation of a world market, with approximately simultaneous changes in quotations, an impossibility. The consequence was that a country would sometimes be exposed for years together to a steady drain of gold and silver, till the scarcity of money began to cause great inconvenience. And a special complication was that, in accordance with Gresham's law, the best coins were always taken for export. Before the introduction of modern systems of coinage, coins were apt to issue from the Mint of very unequal weight. If gold or silver was wanted for export the heaviest and least worn coins were selected. When there was so serious a disturbance of the equilibrium of trade as to cause a prolonged drain of money, it was found not only that currency had become very scarce, but that what was left was made up of coins which, on account of wear, clipping, or errors of manufacture, were materially below the nominal weight. This situation occurred again and again in all countries, and the remedy was usually found in a reduction of the weight of the standard coin. In fact, prices and wages being too rigid to yield to the altered condition of markets, the value of the unit in which they were reckoned was reduced. The monetary unit refusing to rise, legal recognition was given to its fall. Many, perhaps the majority, of the medieval debasements of the coinage in Europe were caused in this way. Some debasements, like those in France during the Hundred Years' War, or in England under Henry VIII. and Edward VI., were impudent attempts to gain illicit profits from coinage, or to reduce the burden of the King's debts without an avowed bankruptcy. But there was nothing dishonest about the debasements which were effected to keep money in the country; and in medieval conditions, with wages and prices to a great extent stereotyped, such debasements were by no means invariably ill-judged. Of all countries England was the freest from illegitimate debasements. The following table shows the successive alterations of the weight of the silver coins (silver rather than gold, being the standard):—

Year.	Value of Troy Pound (11½ ozs. Troy).	Weight of Penny in Grains.	Percentage of Debasement.
Original Standard	20s.	22 $\frac{1}{2}$	—
1299	20s. 3d.	22 $\frac{1}{2}$	1 $\frac{1}{2}$ per cent.
1343	22s. 2d.	20 $\frac{1}{2}$	8 $\frac{1}{2}$ "
1346	22s. 6d.	20	1 $\frac{1}{2}$ "
1351	25s.	18	10 "
1411	30s.	15	16 $\frac{1}{2}$ "
1464	37s. 6d.	12	20 "
1526	42s. 2 $\frac{1}{2}$ d. ¹	10 $\frac{1}{2}$	11 $\frac{1}{2}$ "

The debasements may be regarded as a device for meeting the difficulties caused by the persistent rise in the value of silver. Till the discovery of America there was no adequate fresh supply from the world's mines. The use of a standard of value which is perpetually appreciating hampers business. It increases the burden of debts, and if money wages cannot be reduced *pari passu* with the rise in the purchasing power of money it increases the cost of production. The rise of real wages may not even be in the interest of the wage-earners themselves, if it diminishes employment. So long as these conditions obtained, the tendency was to acquiesce in a depreciation once it was an accomplished fact, and to scale down prices and wages, in relation to silver, by means of a debasement, whenever there was an excessive outflow of money.

After a period of illegitimate debasement, on the other hand, the common practice was to return towards the old standard of value, though often it was not fully restored. In 1543 Henry VIII., faced with the expenses of a war against France and Scotland, initiated a period of debased coinage, the only really flagrant debasement in our history. At first the debasement was slight. The weight of the coins was only diminished by $\frac{1}{16}$, the pound Troy being coined into 48s. instead of 45s., but the ominous feature of the measure was that the standard of fineness, which had been maintained at $\frac{27}{30}$ for nearly five centuries, was reduced to $\frac{5}{6}$. As the Mint price of silver of the new standard was fixed at 40s. a pound, equivalent to 48s. a pound of fine silver, the King reaped the whole

¹ I.e. 45s. the pound Troy of 12 ozs.

profit arising from the reduction of fineness and weight. As the seignorage had previously been only 1s. a pound, the mint price had been 44s. a pound of the old sterling standard, and this was very nearly equivalent to 48s. a pound of fine silver. So long as the Mint price of silver was kept up, that was a sign that the monetary unit was not depreciated. But then the old coins would remain in circulation; the new coinage would be limited and the profit correspondingly small.

The war was prolonged for three years and carried on in Henry VIII.'s characteristically extravagant manner, costing in all £2,135,000.¹ Tudor autocracy could not be maintained without some degree of financial independence of Parliament. Henry could not impose on himself the parsimony which was so characteristic of his father and his daughter, and, the spoils of the monasteries being dissipated, he involved himself deeper and deeper in the debasement of the coinage. In 1544 a new coinage was commenced one-half fine, and the mint price raised to 56s. a pound, fine, and in the following year the fineness was reduced to one-third. The King, as Sir John Rainsford said, had been made "with a red and copper nose,"² for the alloy, being double the amount of the silver, gave its colour to the coin. With the mint price at 56s. it became profitable to melt down all the silver coined before 1543.

In 1547 the death of Henry VIII. left the burden of government and his financial embarrassments to a regency under the presidency of the Duke of Somerset with the title of Protector, the new King Edward VI. being hardly ten years old. The first Mint indenture of the new reign continued the same standard of 48s. to the pound, one-third fine, but the Mint price was raised to 60s. the pound fine. This price, equivalent to 55s. 6d. for a pound of the old sterling standard, is evidence of a depreciation of 20 per cent. in the metal value of the money of account since 1543. It was now profitable to melt down the coins $\frac{1}{3}$ fine of 1543. The financial difficulties were intensified by a recrudescence of the war with Scotland and France.³ In 1549, perhaps in order to tone

¹ Burdon, "Life of Sir Thomas Gresham," Appendix IV.

² Ruding, "Annals of the Coinage," vol. ii., p. 440.

³ Edward VI.'s war expenditure amounted to £1,356,000.

down the King's red and copper nose, the fineness was increased to one-half, and the weight reduced by one-third, so as to make the silver contents of the coins the same as before. Since 1545 the shilling had weighed 120 grains and contained 40 grains of silver; now it was to weigh 80 grains only and still to contain 40 grains of silver. The Mint price of silver, however, was raised to 64s. per pound fine.

The autumn of 1549 saw the fall of Somerset, but the new Protector, the Duke of Northumberland, did not make any immediate improvement. Indeed in 1551, though peace had been restored in 1550, and attention was already turning towards a reform of the coinage, an even more debased issue was resorted to. The weight remained the same, a pound being coined into 72s., but the fineness was reduced to one-fourth. Silver was to be bought by the Mint at 10s. per oz. fine, being a depreciation of 60 per cent. as compared with the price of 48s. a pound prescribed in 1543. But this coinage differed from the rest in being *limited in amount*. It was to be no more than sufficient to provide a profit of £160,000,¹ and subsequently it was decided to be content with £80,000 to pay the King's debts and £40,000 for the fortifications of Calais and Berwick. It appears that the Protector hoped by this last debauch to restore financial equilibrium as a preliminary to a return to sobriety. If the Mint price really represented the conditions of the bullion market, it was high time for this return. But it was obvious that a further issue of debased currency, however strictly limited in amount, could not but cause a further depreciation.

At the very moment when this last issue was being authorised the first step towards a restoration of the standard was actually taken in a proclamation dated the 30th April reducing the current value of all the debased coins by 25 per cent, so that the teston or shilling was to discharge a debt of ninepence only. A more incongruous series of financial measures there could hardly be. Confidence was at an end, and, doubtless with a view to facilitating the absorption of the new issue of

¹ To provide a profit of £160,000 would require coin of the face value of £288,000. According to an entry in King Edward VI's "Journal" on the 6th September, 1551, the total issue was £130,000.

coins one-fourth fine, a proclamation was issued in July inflicting savage penalties on any who should "invent, speak, mutter or devise any manner of tale, news or report" of a further reduction in value. Yet in August that further reduction, the mere report of which might have cost the unfortunate tale-bearer his ears, was actually carried into effect and the teston was reduced from ninepence to sixpence.

By this time the debased coins formed a large part of the total stock of currency, and to halve their value in terms of the monetary unit was to make a very serious reduction in the supply of legal tender money. The next step was to set the Mint to work on a new coinage of reasonable fineness, to circulate at its metallic value. A standard of 11 ozs. 1 dwt. (or very slightly less than the old standard of 11 ozs. 2 dwt.) was adopted, and a pound of silver of this standard was to be coined into 60s. with a seignorage of 1s. In other words the Mint price of $11\frac{1}{2}$ ozs. of fine silver was reduced from 110s. 6d. to 59s. Even though the former price was higher than that actually prevailing in the market, it is evident that the rise in the metallic value of the monetary unit was enormous. And presumably, owing to the arbitrary reduction in the current value of the debased coins, it was immediately effective. The Duke of Northumberland can hardly be blamed for not reverting to the old standard of 45s. to the pound Troy. The return to 60s. must have caused hardship and disturbance enough, to say nothing of the loss to the holders of the debased coins.

Additional light is thrown on the effects of the debasement by the foreign exchanges.¹ The principal foreign centre for the purposes of English trade and finance was Antwerp. The current coin there was the guilder of 20 stivers, and the unit of account was the Flemish pound, equal to six guilders. A guilder contained 396·674 azen¹ or 293·6 grains Troy of fine silver, and the par of exchange was 26s. 10½d. Flemish to £1 sterling (on the basis of the silver coinage of 1526-1543).

Sir Thomas Chamberlayne wrote from Flanders on the 7th June, 1551, that since the calling down of the money (i.e. the reduction of the teston from 12d. to 9d. on the 30th April)

¹ See W. A. Shaw, "History of Currency," Appendix IV,

the exchange had fallen from 15s. to 14s. Flemish for a pound of our money.¹ The Mint was then paying ten testons for an ounce of fine silver. Ten testons became worth 7s. 6d., and this price of silver would have made the Flemish par of exchange 14s. 6d. Flemish to £1. It is not surprising, therefore, that the exchange fell to 14s. In August, the teston being reduced to 6d., the Mint price of silver became 5s. per ounce fine, corresponding to an exchange of 21s. 9d. The exchange, however, only recovered slowly. Perhaps people feared a further reduction of the current value of the debased money, and were reluctant to hold balances of it. At any rate, when Sir Thomas Gresham went out as financial agent to the British Government at Antwerp in December, 1551, the exchange was still no more than 16s. The new coinage then introduced made the Mint price 4s 11d. for an ounce of silver 11 ozs. 1 dwt. fine, and £1 became equivalent to 20s. 5d. Flemish. Yet even in August, 1552, this rate had not become operative, for we find Gresham asking to be supplied with £1200 or £1300 a week at Antwerp to support exchanges, and he mentions that merchants were saying that "ere the payment of the King's dett be made it will bring the exchange to xiii s. iiiii d., wyche I trust never to see that daye".² By April, 1553, the exchange had reached

¹ See Tytler, "History of Edward VI, and Mary," vol. i., p. 380.

² Apparently 13s. 4d., being a depreciation of just over 50 per cent., was remembered as the lowest point touched by the Antwerp exchange. In a statement supplied to Queen Elizabeth, on her accession in 1558, Gresham says: "Ytt may please your Majesty to understande that the firste occasion for the fall of the exchange did growe by the Kinges majesty your latte ffather, in abasing his quoyn from vi ounces fine to iii ounces fine. Whereupon the exchange fell from xxvi s. viii d. to xiii s. iv d., wh'ch was the occasion thatt all your ffine gold was convayd out of this your realme." There is an inaccuracy here, for Elizabeth's "latte ffather," Henry VIII., never reduced the fineness of the coin to three ounces. The reference must be to Edward VI.'s last debasement. At the accession of Edward VI. the depreciation was still moderate, the Mint price of silver being 60s. per fine pound. The Antwerp exchange at 13s. 4d. corresponded to a Mint price of about 96s. per fine pound.

It was on the strength of the passage here quoted that H. D. Macleod in 1858 rather hastily gave the name of "Gresham's Law" to the principle that bad coin drives good out of circulation, though he afterwards found that the law was known before Gresham's time, at any rate to Copernicus and Oresme. There is really no evidence that the principle was not known to others even in the fourteenth century when Oresme lived.

20s. 4d., and though it then fell to 19s. (and would have fallen, Gresham said, to 18s., but for his arrangements for meeting the King's debts) Gresham raised it "in two bourse times" to 19s. 8d. In August, 1553, in a memorial to Queen Mary asking for the continuance of his employment, Gresham claimed to have raised the exchange from 16s. to 22s., "whereunto it yet remaineth". Perhaps Gresham genuinely believed that this improvement in the exchange was due to his own skill in outwitting or blackmailing the English merchants. His machinations may often have affected the exchange "in two bourse times," but a permanent improvement must have been due to a permanent cause. Ever since the reduction of the teston to sixpence two years before, there had been a shortage of legal tender money in England, a shortage which made itself more and more felt as confidence returned and trade revived, and which could not be made good except by the gradual issue of the new coinage at 60s. a pound from the Mint. The exchange therefore was bound eventually to rise so far above the new par of 20s. 1d. as to attract silver from abroad. In those days seignorage charges and obstacles to the movement of the precious metals made the gap between the specie points very wide, and 22s. was not at all a remarkably high maximum.

Substantially the return to a metallic standard had been effected. The depreciation was a thing of the past. But the late King's "red and copper nose" was still to be seen. The base testons or shillings of Henry VIII. had weighed 120 grains and contained first 100, then 60, and then 40 grains of pure silver. The light shillings of Edward VI. had weighed 80 grains and contained first 40 and then 20 grains of silver. All now passed for sixpence. The new sixpence weighed 48 grains and contained 44.2 grains of silver. Consequently while the old testons containing 100 or 60 grains of silver would be melted down, those containing 40 and 20 grains were still over-valued, and still continued to circulate. Nineteenth and twentieth-century experience has shown that the circulation of over-valued coins, limited in amount, can continue without injury to the standard. But this depends on

confidence in the discretion of the Government and respect for its decrees. In the sixteenth century the existence of such coins was felt to be a danger, and Queen Elizabeth soon after her accession determined to remedy it. Her reforms were initiated by a proclamation of the 27th September, 1560, which reduced the current value of the testons containing 40 grains to 4½d., and of those containing 20 grains to 2½d. (other coins of the same standards in proportion). The public were instructed to distinguish the coin by the Mint marks, and authorities were set up locally to settle disputes, and to mark the doubtful coins (those worth 4½d. with a portcullis, and those worth 2½d. with a greyhound). At the same time the old standard of fineness, $\frac{22}{24}$ (from which Edward VI.'s standard of $\frac{23}{24}$ did not differ appreciably) was restored. As 40 grains of pure silver were therefore worth 5·4d., the debased coins were now under-valued, and consequently there was no difficulty in getting them brought to the Mint. The loss inflicted on the holders in fact was substantially greater than it need have been, and the consequent profit to the Government was sufficient to cover the whole expense of recoining with a considerable margin. At last, seventeen years after Henry VIII.'s disastrous venture, there was not merely a metallic standard but a metallic currency. The immemorial standard of fineness of $\frac{87}{100}$ was in operation; the foreign merchant could once more rely on measuring the value of English silver by weight alone. The metallic value of the monetary unit, however, had been reduced by 25 per cent., for the penny weighed only 8 grains instead of 10 $\frac{3}{4}$. But this unit had practically been in operation since 1551, when the redundancy of the base coins was cured by Northumberland's summary methods. Silver had been coined at the Mint at 8 grains to the penny ever since 1552, and the comparative steadiness of the Antwerp exchange showed that this coinage really governed the silver value of the unit. There was nothing sacred about the metallic value of the unit in those days, and there would have been little advantage to set against the hardship which a reversion to the old standard of weight would have caused.

The returns of the Elizabethan recoining give us some

indication of the extent of the debasement. The debased coins recoined weighed 631,950 lbs., and were coined into £638,114.¹ The average fineness was therefore a little less than one-third, showing that very few of those containing even 60 grains of fine silver can have been left. If the coins averaged, say, 54s. to the pound, the total face value of the debased coins dealt with must have been about £1,700,000.

This period, the middle of the sixteenth century, marks the end of the mediaeval dearth of silver. The mines of the New World were beginning to produce their effect. The old system of fixing wages by statute broke down. Formerly successive debasements of the coinage had saved Europe from a perpetual fall of prices. Perhaps in England up to 1543 they had hardly been sufficient to accomplish this. But now that the purchasing power of an ounce of silver was falling, the inducements to debase the coinage were greatly diminished. Temporary difficulties might be caused by trade movements; a country might still be drained of its money to pay for an adverse balance of trade if prices were too long maintained above the economic level. But with the prevailing upward trend of prices this became much less probable. In fact, except for the almost negligible reduction of the weight of the silver coins in 1601, when they were coined at 62s. instead of 60s. to the pound Troy, there was no further debasement in England, and though debasements were still frequent in France in the seventeenth century, the series ceased with the vagaries of John Law in 1720, and thereafter there was no important change in the silver contents of the livre or franc so long as it remained a standard coin.

The beginning of the seventeenth century was marked by the foundation of the banks of Venice, Amsterdam, and Hamburg. The primary function of these banks was to provide a stable and uniform money of account for international trade. They assessed the value of all the many varieties of gold and silver coin which circulated in Europe, and undertook to buy them from traders, paying for them with credits reckoned in this money of account, which was called bank money. As

¹ Ruding, vol. iji., p. 37.

experts in the value of coined gold and silver, they discharged the functions which in the East belong to the "shroffs". Since the intrinsic value of a coin depends not only on its weight but on its fineness, and since its market value, even in a foreign country, may be materially raised above its intrinsic value by its quality of passing current in the country where it is issued, no one but an expert can be relied on to say what credit ought to be given for it. The banks of Hamburg, Amsterdam, and Venice, however, were not mere coin experts, since they not only valued the coins but bought them. On the other hand they had not all the characteristics of modern banks, since they only created credits in exchange for coin or bullion; they did not create them in exchange for discounts and loans.

In England the course of events was different. The London merchants had no official shroff.¹ They had recourse, therefore, to dealers in bullion. This trade of dealing in bullion was in the hands of the goldsmiths, and the practice grew up of entrusting surplus balances of cash to them. The goldsmiths were not subject to the same narrow restrictions as the continental banks. Like the old private bankers of Venice, they created credit by lending and discounting, and did not pretend to hold coin and bullion to the full amount of their liabilities. It is sometimes assumed that the goldsmiths took up the business of banking because they necessarily had strong rooms in which they could keep the money entrusted to them. It is much more likely that it was their knowledge of the bullion trade which specially fitted them for their new function. At any rate they made full use of their expert knowledge. It was they who gave a market price to guineas above the value at which they were coined. It was they who made an illicit profit by "clipping" the silver coins, or sorting out the heavy coins for export or melting. Throughout the seventeenth century, while gold and silver were both becoming more plentiful, this was specially true of silver, and the value of gold in proportion to silver was steadily growing. The

¹ Perhaps Charles I.'s ephemeral revival of the office of King's Exchanger in 1626 may have been intended to meet this need.

coinage ratio was altered spasmodically in different countries ; each in turn lagged behind the others and began to lose its gold, and then, perhaps, raising the value of gold too high, began for a time to lose its silver. This was true of England. An efflux of gold was stopped in 1612 by raising the ratio to 13·3, as compared with 10·9, at which it had stood eight years before. For thirty years gold, being over-valued in England, was imported, and it was silver that was drained away. During the Commonwealth, the ratio of gold to silver in the European coinage systems having risen above 13·3, this was again reversed, and there was a tendency for gold to go abroad. In 1663 the weight of the gold coin was reduced, 44½ pieces of 20s., called "guineas," being coined out of a pound Troy $\frac{1}{2}$ fine, instead of 41, but the ratio of 14·5 thereby established was still too low, and if the nominal value of the guinea had been observed the country's stock of gold coin would soon have been lost. The goldsmiths, however, were in a position to charge what they pleased for gold. They were entitled to pay their depositors in silver, which was the standard coin, and were in a position to stipulate for more than 20s. for the guinea if gold were wanted. Gold, being much the more convenient medium for large payments, often was wanted, and the market price of the guinea was kept up to about 22s. So long as this high price prevailed, silver was undervalued as compared with gold. The goldsmith, finding that he could sell his silver for more gold abroad than at home, became unwilling to pay out silver coins of full weight to his English customers. He put by the heavy coins, to be ultimately melted or exported, and paid out the light ones. When he had no light ones left, it seemed a pity to waste heavy ones, and so he clipped them and ~~made them~~ light.¹ The clipped coins in practice circulated as easily as those which had been coined light or reduced by wear, and the clippings were so much additional gain. By 1690 some misgiving was already caused by the bad state of the silver coins, and a Parliamentary inquiry was instituted,

¹ The new coins, those manufactured since the Restoration, did not circulate if clipped, since they had milled edges which showed the clipping. They were for the most part melted or exported. ²

but nothing was done. At that time, though much of the silver coin was light, and unfit for export, it had not depreciated. The clipped coins and the heavy coins circulated side by side at a value equal to the silver contents of the latter. The market price of silver bullion did not differ greatly from its mint price of 5s. 2d. an oz., though now and then, when there was a special demand for export, it might rise to 5s. 3½d. The monetary unit of account was still at its silver par.*

But in 1689 there occurred a new development. England, being brought into the political orbit of Holland, joined in the coalition against Louis XIV. The eight years of warfare that followed put a strain on the finances of all the combatants, and one of the most important functions of England was to supplement the resources of the great financial centre, Amsterdam, with the newly-developed credit system of London. The London goldsmiths, however, were rather lukewarm supporters of the Government and of the war. Though Charles II. had half-ruined them by confiscating their cash reserves, there was a danger that the Revolutionary Government would not recognise the obligations of the Stuarts, and their chances of recovering their money were diminished so long as the dynasty which had robbed them was not on the throne. The result was that in 1694 an entirely new credit institution was set on foot by the London merchants, independently of the goldsmiths, to provide money for the Government. The money, to the amount of £1,200,000, was to be subscribed not to the Government but to a new bank, which in turn would lend it to the Government. The Bank of England was incorporated by a statutory charter, and was empowered to issue notes to an amount equal to its capital of £1,200,000, and to discount bills and make advances of money. The scheme was well calculated to attract the merchant's money. He could afford to open his strong-box and to put the hard cash which it contained at the disposal of the Government, because he could rely on borrowing from the bank as soon as he needed the cash again. The goldsmiths were accused of making loans on usurious terms, and some of them were of doubtful solvency; the credit facilities offered by the

new bank would enable merchants to economise balances more effectively than before.

Thus the foundation of the bank added £1,200,000 in paper to the purchasing power in circulation, and at the same time enabled traders to carry smaller balances than before. The effect was inflation. Had the currency been in a sound condition the consequence would have been an export of gold and silver. But there was no heavy silver, and the goldsmiths could put what value they pleased on gold. The currency began to depreciate. The capital of the bank was subscribed by the 2nd July, 1694, the charter was granted on the 24th July, and it began business forthwith. Even before the end of 1694 the prices of gold and silver bullion began to be slightly higher than usual. The guinea, which usually passed at 22s. or less, rose in December to 22s. 6d. ; silver, of which the mint price was 5s. 2d. an ounce, touched 5s. 5d. in November.¹ The guinea rose steadily throughout the first half of 1695, and reached a maximum of 30s. on the 14th June. Silver also rose, but neither so quickly nor so much. It was at 6s. 5d. in September. Neither silver nor gold reacted far from these maxima for the remainder of the year. What was of more immediate importance was that the exchange on Amsterdam fell to 29, 28, and even 27 as compared with a par value of 37 ; that is to say, it was at a discount of 22 to 27 per cent. Remittances from England to the Army in the Netherlands lost about a quarter of their value by exchange.

It was seen that the only remedy was a reform of the coinage. But this presented many difficulties. Should the silver contents of the pound sterling be maintained or diminished ? Should the clipped silver be received at its nominal value, or, as in Elizabeth's recoinage, at its bullion value, or at some intermediate value ? If it were received at anything above its bullion value, what would the cost be, and how was it to be met ? A Parliamentary Committee was appointed in January, 1695, when the depreciation was only beginning,

¹ For particulars of the prices of gold and silver and the rates of exchange on Amsterdam, see Thorold Rogers' "First Nine Years of the Bank of England".

and recommended a slight reduction in the weight of the pound sterling. But the evil developed rapidly, and the Government called for a report from the Secretary of the Treasury, William Lowndes.

Lowndes proceeded to examine previous similar cases. He found that precedent was against any alteration in the fineness of the silver coinage. The standard of $\frac{87}{40}$ had been maintained unaltered century after century, save for the unhappy exception in the reigns of Henry VIII. and Edward VI. A departure from a standard supported by so long a tradition would be almost dishonourable. "All foreigners that deal with us regard the intrinsic value more than the extrinsic denomination, and exchange with us accordingly. If base money should be made, the intrinsic value thereof would be uncertain, or might be disputed." In fact, the value of British silver would no longer be ascertainable by the weight alone, and confidence would no longer be felt in it.

But, though the standard of *fineness* had so long a tradition behind it, Lowndes found that the standard of *weight* had been repeatedly reduced. The reason, he held, was "that whensoever the extrinsic value of silver in the coin hath been, or shall be less than the price of silver in bullion, the coin hath been and will be melted down". This was exactly what the country was suffering from in 1695. The monetary unit of account had parted company from the metallic standard. Silver bullion was quoted at 77d. an ounce, and shillings containing more than $\frac{1}{7}$ of an ounce of standard silver were necessarily exported or melted down.

"One may foresee," says Lowndes, "that continuing the silver monies (either old or new coins) upon the present foot, whilst bullion is so much dearer, will inevitably produce consequences pernicious to the whole; in effect it will be nothing else but the furnishing offenders with a species to melt down at an extravagant profit, and encouraging not a necessary, but a violent and exorbitant exportation of our silver to the foreign parts, for the sake of the gain only, till we shall have little or none left in the Kingdom." He therefore recommended that the amount of silver in the pound sterling should

be diminished by one-fifth ; that is to say, that the mint price of silver should be 77½d. an ounce instead of 62d. In order to avoid the expense and inconvenience of recoining the silver of full weight, which was still believed to exist, though hoarded and kept out of circulation, he proposed that the value of the coins should be increased rather than the weight diminished, so that the shilling would pass for 1s. 3d., the crown for 6s. 3d., and so on.

Lowndes' proposals were published, and elicited a famous reply from the masterful common sense of John Locke. This reply, admirably expressed in Locke's characteristically vigorous English, denounced the raising of the value of the coins as a futile pretence. "The increase of denomination does or can do nothing in the case, for it is silver by its quantity and not denomination that is the price of things and the measure of commerce ; and it is the weight of silver in it, and not the name of the pieces that men estimate commodities by and exchange them for." "Money differs from uncoined silver only in this, that the quantity of silver in each piece of money is ascertained by the stamp it bears ; which is set there to be a voucher of its weight and fineness." "An ounce of silver, whether in pence, groats or crown pieces, stivers or ducatoons, or in bullion, is and always eternally will be of equal value to any other ounce of silver, under what stamp or denomination soever." An excellent theory of currency this, with the great advantage of being intelligible, and Locke's reply has done much to promote the maintenance of a fixed metallic standard in his day and ever since. But with all its merits it had one defect—it completely missed the point at issue. If the value of the silver coins had depended solely on the quantity of silver they contained, the difficulty would never have arisen at all. Lowndes, notwithstanding his submissive acceptance of mediaeval precedents, could see the distinction between the "intrinsic value" and the "extrinsic denomination" of the coin ; between its value, when melted, as a raw material of industry, and its value as the legal means of discharging a debt. He understood that the two values might diverge, that a clipped coin might contain less than its nominal value in silver

and a heavy coin more, that the price of silver meant something more than the price of silver in silver. But of course he had not arrived at the conception of a money of account measurable by its purchasing power in terms not only of silver but of commodities generally ; a monetary unit, a change in the value of which meant a change in all prices and wages. He argued that, if the price of silver had risen, that must be because silver was scarce, owing as he said to an unfavourable balance of trade. And yet further on he attributes to the clipt or bad moneys the "raising the price not only of merchandises, but even of edibles and other necessaries for the sustenance of the common people, to their great grievance". The rise in silver and the rise in gold were merely symptomatic of a general rise of prices, or in other words of a fall in the value of the monetary unit. Nowadays, such a fall can be corrected (not without tribulation) by a curtailment of credit. In 1695 no such method was known ; if the clipt coin was withdrawn, and coin of full weight issued in its place, silver must be exported until the scarcity of money compelled a reduction of prices. Lowndes foresaw the export of silver, though he did not see that it would eventually be checked by a fall of prices. Locke remained blind to the danger. Locke, however, amid all his vigorous irrelevancies, produced one argument which deserved to be decisive. If the money be raised one-fifth, he said, "it will weaken, if not totally destroy, the public faith, when all that have trusted the public and assisted our present necessities, upon Acts of Parliament, in the million lottery, Bank Act and other loans, shall be defrauded of 20 per cent. of what those Acts of Parliament were security for".

Circumstances had changed since the time of Queen Elizabeth ; currency problems had been transformed by the development of credit. England was playing a leading part in a great continental war. Her greatest contributions to the coalition of which she formed part were then, as they were against Napoleon, and as in the present war, wealth and sea-power. To utilise her wealth, it was indispensable that her Government should command confidence. The Government had become the greatest of all debtors. Was it calmly to

reduce the burden of its debts by the simple process of calling 16s. a pound? If so, where was it to stop? Perhaps when the old shillings had been circulating as "testoons" at 1s. 3d. for a year or two, the Secretary of the Treasury, reinforced by one more precedent, might have found it necessary to urge that the value be raised to 1s. 6d., to 2s., indeed to any sum without limit. Moreover, the national debt was not the only new circumstance. The mediaeval debasements had usually been effected when the money had already been clipt and depreciated for a long period of years. Edward VI.'s first attempt to coin good silver at 6s. to the pound Troy, was made seven years after the first issue of silver 50 per cent. fine; and the successful recoinage of 1560 took place seventeen years after the beginning of Henry VIII.'s debasement. But the depreciation of 1695 took every one by surprise. In December, 1694, the prices of guineas and silver bullion were almost normal. By June, 1695, the guinea had risen one-third; and by September silver had reached its maximum of 6s. 5d. an ounce. To stereotype the effects of so sudden a disturbance was a very different thing from giving legal recognition to a fall in the monetary unit which had persisted for seventeen or even for seven years.

Further, the justification for the mediaeval debasements had been the intractability of prices and wages. But prices and wages had become very much more pliable. It was still true in 1695, as indeed it is at the present day, that it is much easier to reduce the metallic standard to the monetary unit than to raise the monetary unit to the metallic standard. A reduction in the metallic standard involves no more than a recoinage, perhaps even no more than a proclamation altering the denominations of the existing currency. A rise in the value of the monetary unit of account means a change in *all* prices and nominal values. But in 1695 it might be regarded as certain that trade would soon accommodate itself to a restored level of values. The process must necessarily be unpleasant, but the maintenance of a stable metallic standard was worth the sacrifice.

The sacrifice was a serious one. The mere direct cost to

the Exchequer was, for those times, prodigious. Lowndes had estimated that the silver coin in circulation was £5,600,000, that of this total £4,000,000 was probably clipped and seriously deficient in weight, and that the cost of restoring the £4,000,000 to the old standard would be £2,000,000. The actual amount recoined in the years 1696-99 was no less than £6,882,000. Lord Liverpool, writing in 1805, estimated the total cost at £2,700,000. The transition period, while the recoinage was taking place, was full of difficulty and danger. In February, 1696, the value of guineas was reduced immediately to 28s., and prospectively to 26s. as from the following 25th March, and a further Act reduced it to 22s. as from the 10th April. This measure, by itself, if effective, would have soon led to the displacement of gold from circulation by the overvalued clipped silver, but it was accompanied by arrangements for withdrawing the silver at face value up to the 4th May, 1696. There followed an interval of extreme embarrassment, when business had to be carried on almost without coins below the value of the half-guinea. The natural consequence was that everyone who had the right to draw silver from the banks, the Bank of England and the Goldsmiths' banks alike, proceeded to do so. The Goldsmiths themselves presented batches of notes to the Bank of England for payment. Macaulay, quoting l'Hermitage, says that this was the result of a plot, and that the Directors, on that ground, refused payment. However pleased the Goldsmiths may have been to see their Whig rival in difficulties, little plotting can have been required to bring about a simultaneous exercise of their rights to demand silver from it at a time when they must have been at their wits' end to satisfy the demands of their own customers. The result was that the Bank of England had to suspend cash payments, except for such partial payments as the gradual issue of the new coins enabled it to make. And when the new silver did get into circulation, the Bank of England note was at a discount of 16 per cent. The discount continued, subject to fluctuations, till September, 1697 reaching a maximum of 24 per cent. in February, 1697. In fact, till the end of the war there were two monetary units, one

based on specie and the other on paper, and the latter remained simply unaffected by the recoinage. There were two quotations of the foreign exchanges, the quotation in paper being practically as adverse as before. When the Bank of England, relieved from the strain of finding money for the war, surmounted its difficulties, and paper and money prices were again identical, the exchange on Amsterdam was again unfavourable. From July, 1697 to the end of 1700 it remained between 35 : 1 and 35 : 10, as compared with a par of 37. This was nothing like the state in which it had been in 1695, but it meant that the money of account had never quite accommodated itself to the restored silver standard. The guinea, it is true, passed regularly at 21s. 6d., as compared with the legal maximum of 22s., but even 21s. 6d. was an overvaluation. The newly-coined silver was steadily drained away, just as Lowndes had foreseen. As the value of the guinea became stereotyped, the country settled down to a virtual gold standard. In 1717, the dearth of silver becoming serious, Sir Isaac Newton, who held the post of Master of the Mint, warned the Government that unless something were done, silver coin would soon be quoted at a premium, i.e. the money of account and the metallic money would again part company. He calculated that in order to counteract the overvaluation of gold the guinea ought to be reduced to 20s. 8d., and recommended that at any rate it should be reduced to 21s. It was fixed at 21s. by proclamation, and, this being still an overvaluation, hardly any silver was brought to the Mint to be coined for a century. The residue of the coins of William III. remained in circulation, becoming more and more worn, till at last in 1816 the restricted coinage of overvalued silver of limited legal tender was introduced. Thus in the end the silver standard so earnestly advocated by Locke never was effectively restored. The monetary unit of account, remaining persistently below its nominal silver value, assumed by use a gold basis. Locke's arguments, however, were not wasted. They were called in aid in the nineteenth century to defend the gold standard more effectively than in his own day to defend the silver standard.

CHAPTER XVIII.

THE GOLD STANDARD.

THE nineteenth century saw what was perhaps the most remarkable and far-reaching of all changes of standard, the almost universal adoption of the gold standard. The change came very gradually. It may be said to have begun with the English Coinage Act of 1816, which put the coinage of this country practically on its present footing. This Act gave legislative recognition to a state of affairs which had already been long in existence. From 1717 to 1785 practically no silver was coined, because silver was undervalued in our coinage in comparison with gold.

When the guinea was fixed at 21s. the ratio of the value of gold to silver worked out at 15·21 to 1. The market ratio approximated to that of 14·5 to 1, which prevailed in France, for the population and wealth of France were much greater *relatively* to the rest of Europe in the eighteenth century than later on. Consequently while the French coinage was genuinely bimetallic, with silver on the whole predominating, the British, like those of Spain and Portugal, which had an even higher ratio, was almost exclusively gold.

After the Seven Years' War, the stability of this system began to be threatened owing to the worn condition of the gold coinage. In 1695 the monetary unit had become depreciated, owing to the silver coins being below weight; now the abrasion of the gold coins produced the same effect. It seems likely that in the second case as in the first, the real cause was an improvement of credit facilities, which made the currency relatively redundant and drove the best coins abroad.

For it is from 1750 that the great and rapid growth of the country banks' dates. By 1774 the evil had grown serious enough to demand a remedy. At the instance of Lord Liverpool, then Master of the Mint, the entire gold coinage was recoined at the public expense, and provision was made in an Act of 1774 for the regular recoining of light gold coins for the future. The silver coins, though even more worn than the gold, for they dated for the most part from the years 1696-99, were left untouched. Silver, however, was disestablished from the position of nominal equality with gold as unlimited legal tender. It remained unlimited legal tender by *weight*, but by *tale* it was made legal tender for £25 only. As there was no silver in circulation that was not far below the legal weight, payment by weight was a dead letter. This Act of 1774, however, was passed for a limited period only and though twice renewed was allowed to lapse in 1783.

In 1785 there occurred a new development which was not appreciated at the time. Under the ministry of Calonne a change was made in the French coinage. The mark of gold was to be coined into 32 *louis d'or* instead of 30. This raised the ratio from 14½ to 15½, and it ceased to be profitable to bring silver to be coined. It may be asked why gold was not immediately attracted to the French Mint from all quarters, till the existing silver coins were driven out of circulation. The explanation is that there were coinage charges, amounting to about 2 per cent., and that so considerable a "remedy" of fineness was allowed (and regularly taken advantage of)¹ that the coins which ought to have been $\frac{1}{2}$ fine were usually only $\frac{9}{10}$ fine. The bullion dealer who sold a mark of fine gold for its Mint price in gold coin and exchanged the gold coin for silver, did not get 15½ marks of fine silver, but hardly 15. There was, therefore, no immediate effect on the market ratio.

But four years later came the Revolution, and with the Revolution came the assignats. By 1794 most of the French stock of gold and silver had been driven abroad, and much of it no doubt was melted. The undervalued silver would be sure

¹ See the results of actual assays quoted in Sir R. (now Lord) Chalmers' "Colonial Currency," Appendix A.

to go first, and would flood the silver market and raise the relative value of gold. The market ratio at Hamburg, which was 15 in 1793, rose to 15·37, the highest level for sixty years, in 1794, and 15·55, the highest till then known, in 1795. And this rise was permanent. In 1793-95 the price of silver in London fell below the coinage price of 62d. an oz. With the unfavourable movement of the exchanges in 1795-96, both gold and silver rose above the coinage prices, but after the crisis of 1797 silver fell again, and in January, 1798, was as low as 6d. There was a danger that silver might begin to displace gold as the standard of value, and an Act was hastily passed absolutely suspending the coinage of silver and re-enacting the limitation of legal tender which had been in force from 1774 to 1783. This Act of 1798 was intended to be temporary, and a Commission of Inquiry was set up, with Lord Liverpool as one of its members, to advise as to the future system of coinage. But as the Bank Restriction Act was prolonged, and the country settled down to a paper currency, it seemed superfluous to discuss the coinage, and the inquiry was suspended. Lord Liverpool took the opportunity to record his own recommendations in his famous letter to the King, which is recognised as one of the greatest authorities upon the British coinage. In this letter, written in 1805, almost on his death-bed, he pointed out that the gold standard had practically been already established, and, elaborating a suggestion made by Adam Smith,¹ he advocated the legal recognition of this condition of things by making silver legal tender only for small amounts and by making a substantial coinage charge for silver. The coinage charge would discourage people from bringing silver to the Mint to be coined, and would make the use of silver as the standard of value

¹ "Wealth of Nations," Book I., chap. v. The suggestion of a subsidiary coinage of limited legal tender was not altogether new. Not only had it already been applied, as Adam Smith pointed out, to the copper coinage, but it was applied experimentally to silver halfpennies and farthings in the reign of Henry VI. By an Act of 1446 for a period of two years the pound of standard silver was to be coined into 33s. worth of these coins, as compared with 30s. worth of groats or pennies, and the smaller coins were to be legal tender only for 1s. in every 20s. (Ruding, "Annals of the Coinage," vol. ii., pp. 335-37.)

impossible. Years afterwards, Lord Liverpool being then dead, and his son Prime Minister, the Commission of Inquiry was called together again, in view of the approaching resumption of cash payments by the Bank, and issued a report recommending a gold standard on these principles, that is to say the free coinage of gold, which was to be the sole unlimited legal tender, and the coinage of silver, subject to a charge, to provide a subsidiary coinage of limited legal tender. The silver was to be bought at the old Mint price of 62s. a pound Troy (equal to 62d. an oz.), and the coinage charge was to be 4s., so that the pound would be coined into 66s., of which 4s. would be retained by the Mint. The Act of 1816 embodied these recommendations. It provided for the free coinage of gold at the then existing Mint price, which was £3 17s. 10½d. an oz.¹ It removed the prohibition on the coinage of silver, which had been in force since 1798, and authorised the Master of the Mint to coin any silver brought to the Mint at the new rate of 66s. a pound. It also enacted that, *from a day to be fixed by a Royal Proclamation*, "it shall and may be lawful for any person" to bring silver to be coined, and "there shall be delivered to the person bringing in and delivering the same a sum in silver coins . . . after the rate of 62s. . . . for every pound Troy of the standard fineness and weight."

Now this provision compelled the Mint to buy silver at 62s. a pound, and to pay for it in silver coin. At that time the market was governed by the ratio of 15½, which had been established in France by Calonne, and had survived the Revolution, the Empire and the Restoration. Silver was worth at that ratio 60s. 10d. a pound, and if a higher price was to be offered in England all the silver in France might be drawn across the Channel. True, the silver would only have been paid for in coin of limited legal tender, but the price of 62s. a pound would none the less have been effective until the redundancy of silver had become so great as to drive the silver coin to a discount. In short, the scheme recommended by the Commission, and the Act of 1816 as based upon it, were

¹ As 4½ guineas were coined from a pound and a guinea was worth 21s., the pound was worth £3 14s. 6d., and the quince £3 17s. 10½d.

unworkable. Lord Liverpool had foreseen these dangers, though he had by no means appreciated their importance, and he had, as an afterthought, suggested the remedy. The mere levy of a coinage charge was not sufficient in all circumstances to limit the coinage of silver; the coinage of silver must be placed within the absolute discretion of the Crown, and no right could be left to private persons to have silver coined at any stated price. And luckily the Act of 1816 could be very readily adapted to apply this remedy. No proclamation was ever issued fixing the day after which people might insist on selling silver to the Mint 62s. a pound.¹ Their right to do so, therefore, remained in abeyance till the Act was repealed by the Coinage Act, 1870, by which our coinage is at present regulated, and which has nothing to say regarding the price at which silver is to be purchased.

The system might equally well have been threatened with failure if the market price of silver had risen above 66s. a pound (66d. an ounce), for in that case it would have paid to melt or export the silver coin. But the French bimetallic system was a safeguard against this happening without ample warning. For so long as France had silver to export, and was bound to buy gold at the ratio of 15½, the world price of silver could not rise to 66d. an ounce, which corresponds to a ratio of 14½.

It is a striking proof of the degraded condition of the old silver coin that the considerable quantity (about £2,500,000) remaining in circulation in 1816 had survived the Bank restriction without being exported, in spite of the premium which was at one time nearly 40 per cent. above the coinage price of 62d.

Since 1717 the British gold coin had been the guinea of 21s., which differed inconveniently from the pound sterling, the unit of account. The opportunity of the Coinage Act of 1816 was taken to revert to the 20s. gold piece (the value originally intended for the guinea) and the old name of

¹ At the end of June, 1816, when the Act received the Royal Assent, the price of silver was actually 5s. 6d. per oz. or 60s. 6d. a pound. Here was practical evidence that the proposed Mint price of 62s. was too high.

"sovereign" which had belonged to the Tudor coins of that value,¹ was revived.

Thus was completed the establishment of the gold standard in England, and thus perished the Mint price of silver fixed in the last years of Queen Elizabeth, and fought for so strenuously by Locke.

But even then the gold standard did not immediately come into practical as well as legal operation. The Bank restriction was still in force, and though the premium on gold had for the moment almost vanished, the steps taken towards the resumption of cash payments suffered a set-back in 1818. The premium on gold reappeared. There followed the Parliamentary Committees of 1819 and Peel's Bill providing for gradual resumption. Though there was no division against the resolutions embodying the principles of the Bill, a small coterie of inflationists found a spokesman in Lord Folkestone, who, like Lowndes in 1695, wanted to reduce the standard. He argued that the re-establishment of the coinage price of £3 17s. 10½d. an ounce would cause unnecessary hardship, and he urged that a new coinage price of about £4 os. 6d. corresponding to the then market price of gold should be adopted. Peel, following in the footsteps of Locke, roundly declared that a departure from the long-established legal standard "was a proposition which could be viewed in no other light than as a fraud on the public creditor". Indeed it would have been a mean-spirited course to go back on the century-old standard on account of so trifling a premium on gold, a premium which, as it turned out, the action of the market wiped out in a few months, before any of the provisions of the Act of 1819 had come into operation.

The next country to adopt a gold standard was the United States. As in the case of England, the United States passed from silver to gold in the first place not by a definite act of policy but by an accidental over-valuation of gold. As in the case of England, too, the currency history of the United States was varied during the transitional period with excursions into

¹ The sovereign of 150s. was first coined by Henry VII. in 1489, of the old standard (only $\frac{1}{2}$ alloy). The sovereigns of Henry VIII. and Queen Elizabeth were of Crown gold $\frac{1}{2}$ fine, like the modern sovereign.

the realm of paper currency. The Americans may even be said to have invented paper money. Some of the Colonies had indulged in it before John Law embodied a forced currency in his "system," and by 1763, at the end of the long conflict between England and France for supremacy in the North American Continent, so great had been the abuse of legal tender notes that the Imperial Parliament, by an act of paternal legislation in the spirit of the old colonial system, forbade further issues. At that time the unit of value in America was practically silver, in the form especially of the Spanish dollar. Far the greater part of the world's supply of silver came from the mines of Spanish America. It was coined on the spot at a number of local mints, for it is convenient to transform the precious metals into coin of known weight and fineness at the earliest stage after extraction, in order that even when bought as commodities the quantity and value can be readily and certainly estimated.

The supply of the precious metals naturally came to North America direct from the Mexican or Peruvian mines, and as gold was over-valued in Spain and Portugal as compared with silver (the ratio in both countries being 16 to 1) it was silver rather than gold that came, and the silver Spanish dollar held the field as the standard of value and the medium of exchange in 1775, when the War of Independence broke out. The rebel Colonies were ill-equipped to stand the strain of war finance. There was no adequate machinery of taxation, and so desperate a cause did not command the confidence of lenders, at any rate before Saratoga. Individually and collectively the Colonies resorted to the expedient of paper money, with which they were already familiar. In their collective capacity they were represented by an Assembly of delegates called the Continental Congress, and the paper issues authorised by this body, to the preposterous total of \$200,000,000, rival the ill-starred fame of the French assignats under the name of Continental Currency. Depreciation began in 1777. By 1780 the paper dollar had sunk to $\frac{1}{4}$ of its value in silver. In that year the system was brought to an end. The success of the Americans had brought the help of France, Spain, and Holland,

both military and financial. Congress took advantage of the consequent improvement of its credit to make an issue of 5 per cent. five-year notes or bonds to be subscribed for in the depreciated paper money, which was taken at not more than $\frac{1}{10}$ of its value, and when received was destroyed. A large portion of the paper money still remained unredeemed, but from 1781 it ceased to be used as a medium of payment at all. Having become almost valueless, much of it was not even thought worth preserving, and when in 1790 the remainder outstanding was accepted in subscription for stock at $\frac{1}{10}$ of the nominal value, only \$6,000,000 out of \$78,000,000 estimated to be in existence came to light. Presumably the balance of \$72,000,000 had been destroyed as worthless.¹ From time to time Congress had issued internal loans, which had been subscribed in paper. To repay \$1000 in silver to a man who had subscribed \$1000 in paper, when that sum was the equivalent of only \$25 in silver, would have been as extravagant as to repay \$1000 in this depreciated paper to the lender of \$1000 in silver would have been dishonest. Liability was acknowledged in respect of the successive loans according to a scale measuring the actual depreciation of the paper in the market at the date of each loan.

Thus the new community lived down its debauch of paper money and reverted to the dollar of Spanish America. When a national coinage came to be initiated it was based on a new silver dollar very nearly equivalent to the old. Gold was also to be coined at a ratio of 15 to 1, but as the value of gold in Europe was rising just then, and France adhered to the ratio of 15 $\frac{1}{2}$ to 1, this was an under-valuation, and gold did not circulate in America.

In 1834, the currency having been composed exclusively of silver ever since the introduction of the new coinage, it was decided to raise the ratio in order to attract gold. It was not apparently intended to drive out silver altogether, but in fact the ratio adopted, the Spanish and Portuguese ratio of 16 to was as much too high as the old ratio had been too low. The result was that gold steadily took the place of silver, and

¹ "Financial History of the United States," D. R. Dewey, section 16.

silver was relegated to a subordinate position just as it had been in England in the eighteenth century. By 1853 the loss of silver had become inconvenient, and subsidiary silver coins of inferior fineness were coined on the model of the English system.

The period from 1848 to 1871 was one of strife and change in Europe and America. Revolutions and wars left behind their usual legacy of forced paper currencies. The year 1871 found Germany an Empire, France a Republic, Italy united, the United States saved from secession and slavery, Austria and Hungary reconciled in a Dual Monarchy. France, Italy, Austria-Hungary, Russia, and the United States had all been compelled by the stress of war to resort to issues of inconvertible paper. In France, the notes of the Bank of France, though inconvertible, were not materially depreciated. In all the other countries named, the paper money was at a discount. England had a gold standard, France and the members of the Latin Union had bimetallism based on the ratio of $15\frac{1}{2}$ to 1 (though of course both metals had been driven out of Italy by the depreciated paper), and Germany, Holland, Scandinavia, and practically all Asia had a silver standard.

In the period since the gold discoveries which were made in about 1850 in California and Australia, France and her bimetallic associates of the Latin Union had been steadily absorbing gold and exporting silver, and in 1865, as has already been mentioned, it became necessary to institute a subsidiary silver coinage below the standard fineness. It seemed as if France would soon be as much a gold-using country as England and the United States, and the Government of the newly-constituted German Empire feared that the continuance of the silver standard would place their people at a disadvantage in commerce and international finance. It was, therefore, decided to adopt a monometallic gold standard in Germany. The payment of the French indemnity gave Germany for the moment the advantages of a creditor nation, and the opportunity was taken to buy large quantities of gold in the world's markets.

At first the change of standard did not appreciably affect the value of the German monetary unit. As between the new

gold and the old silver coins the same ratio of $15\frac{1}{2}$ had been adopted as prevailed in France, and till 1873 the ratio in the market did not differ materially from this. But in 1872 Norway, Sweden, and Denmark followed the German example and adopted a gold standard, embodied in the Scandinavian Convention (18th December, 1872). On the 21st May, 1873 Holland suspended the free coinage of silver. By that time the increased demand for gold had begun to affect its price in terms of silver. In 1873 the ratio approached 16, in 1874 it exceeded that figure. The new production of gold from the mines had fallen off, and the bimetallic countries had hastily to limit and ultimately to suspend the free coinage of silver for fear of being rapidly denuded of their gold and left with a silver standard. There ensued an ever-increasing divergence of the ratio from the old figure of $15\frac{1}{2}$. The various countries which had passed from a silver or bimetallic to a gold standard for the most part retained their old silver coins in circulation as unlimited legal tender, though, except for subsidiary coins, they issued no new silver. The five-franc and three-mark pieces became tokens, of which the intrinsic value was below and soon far below the nominal value. It will be seen that this very important change of standard was effected without any *discontinuity*. Moreover, unlike the mediaeval debasements, it was a change from a lower to a higher unit of value. When the difference in value did make itself felt, there followed all the consequences of an appreciation of the standard, falling prices, depressed trade, low profits, unemployment.

But the questions of principle involved in a change of standard were hardly raised in the case of the countries which substituted gold for silver while on a metallic basis. To find these questions agitating the minds of Governments we must turn to the countries which in 1871 were using inconvertible paper and which were faced with the problem of a resumption of specie payments.

The United States had issued inconvertible notes (called "Greenbacks") during the Civil War to an amount approaching the authorised maximum of \$450,000,000. In the last year of the war this paper money had depreciated more than 50 per

cent. The restoration of peace speedily raised its value, but even when peace was an accomplished fact the discount was still some 30 per cent. The first measure taken to correct this depreciation was a reduction of the quantity of paper in circulation. This had been reduced to \$356,000,000 by February, 1868, when political opposition brought the policy of contraction to an end. Various devices were then resorted to with a view to making resumption possible, but none, except the gradual accumulation of a stock of gold, was really put into effective operation. And so long as the quantity of paper in circulation was not reduced, even the accumulation of gold would be of little use. To restore the paper currency to par the gold would have to be applied to redeeming so much of it as was redundant; that is to say, to *reducing* the amount in circulation. The upshot was that practically no positive step was taken to facilitate resumption. The result seems at first sight rather surprising. In the first months of peace the gold value of 100 paper dollars was about 70. The averages for the years 1866, 1867, and 1868 were 71, 72·4, and 71·6. The contraction in three years from a circulation of \$433,700,000 to one of \$356,000,000 had apparently made no visible impression upon the depreciation. But in the following year 1869 an improvement made itself felt, and by the end of the year the gold value had risen to 82·3, and the average for 1870 was 87, and for 1871, 89·5. There then succeeded another period of stagnation, and the average did not rise well above 90 till the end of 1876, from which time the paper money rose rapidly to par and specie payments were actually resumed on the 1st January, 1879.

What, then, is the explanation of these vagaries? Why did the greenback remain obstinately depreciated when the issue was contracted, and take two apparently capricious leaps forward (separated by another interval of reaction) when no measures were being taken to support it? The answer is to be found in the variations to which the value of gold was being itself subjected in consequence of credit movements in Europe. The greenback was making very satisfactory progress in 1866, having reached 76·6 in March and 78·6 in

April, when in May the great crisis caused by the failure of Overend and Gurney broke out in London. The effect of the crisis was hardly felt in May, and the greenback was still at 75·9 in that month, but it fell to 67·2 in June and 66 in July. This illustrates the effect of an external crisis on the exchanges. The value of gold in London was abruptly increased, and the value of paper in New York in terms of gold correspondingly decreased. There followed a period of depressed trade and falling prices in Europe, and the contraction of the paper currency in America did no more than keep the greenback approximately to a fixed proportion with gold. By 1869 and still more in 1870 the revival was beginning in Europe. It was stimulated rather than retarded by the Franco-German War, since the paper issues in France released large quantities of gold and silver for export. The years 1871-73 saw an unusually vigorous expansion of trade. As nearly always happens, this trade expansion was marked by large movements of capital, and capital flowed especially towards the United States, which was then the greatest of "new" countries. In the four years, 1869-72, the railways of the United States were increased by no less than 25,000 miles. Since the Civil War the foreign trade returns had shown an excess of imports over exports, which, in view of the heavy annual liability of the country for interest on capital previously obtained from the Old World, implied that a very large amount of fresh capital was being imported. This excess of imports amounted for the four years, 1869-72, to \$458,000,000 or \$114,500,000 a year, while after this period an excess of exports was the almost invincible rule. Here we have an instance of the stream of investment from the old countries to the new increasing in volume with the revival of trade, and also of the consequent favourable tendency of the foreign exchanges in the new countries. The rise in the gold value of the paper dollar from 74 at the end of 1868, to 82·3 at the end of 1869 and 90·3 at the end of 1870, was due to the combined effect of the revival of credit, which reduced the value of gold in Europe, and of the flow of fresh capital into the United States. From the end of 1870 till the crisis of 1873

the value of the greenback rose but little. It touched 91·5 at the end of 1871, but fell a little in 1872, and was as low as 85 in May, 1873. The explanation is that the credit expansion in Europe was followed by a credit expansion in the United States, and the greenback fell in value as quickly as gold. Moreover, though the importation of capital tends to make the exchanges favourable, this tendency does not outlast the actual process of importation. The influx of European capital might be enough to bring the value of the greenback up to 90 in 1870; in order to keep it at 90, the influx must continue unabated; in order to raise it above 90, the influx must grow actually greater. In 1871 and 1872, if the importation of capital increased at all, the effect was offset by the growing inflation in the United States itself and the value of the greenback began to decline.

In 1873 a new development occurred. In 1870 and 1871 the expansion of credit had been stimulated by the release of gold from France. In 1872 and 1873 it began to be checked by the absorption of gold into Germany. The German gold standard law was passed in 1871, and the coinage of gold began in 1872. The gold coined in 1872 amounted to 421½ million marks and in 1873 to 594 millions. The withdrawal of about £50,000,000 of gold from other countries necessarily started a contraction of credit. Even in November, 1872, the bank rate in London rose for a time to 7 per cent. Early in 1873 Germany stopped buying gold (the heavy coinage in that year being largely from gold already bought). But trade and prices had already turned the corner. The first danger point arose in Austria-Hungary. Austria-Hungary had emerged in 1867 from a disastrous period of twenty years, marked by a bitter civil war and two unsuccessful foreign wars. The Italian and Hungarian questions had been settled for at least a generation, and there was at last a prospect of tranquil economic development. Here was an enticing opportunity for German speculators, just at a time when German credit was being abnormally stimulated by the indemnity payments. From the point of view of railway construction Austria-Hungary was almost a "new" country. In 1870 the whole

mileage was only 5875. In 1873 it had risen to 11,060, so that 5185 miles had been added in three years. Like the United States, Austria-Hungary normally exported more goods than she imported. Yet for the five years, 1870-74, there was an aggregate excess of imports of 619 million florins, or about £60,000,000. Speculation in Germany itself had been controlled; and the contraction of credit had less effect than might have been expected in Berlin, but there was an acute crisis in Vienna. The effect of an *external* crisis is seen in the fall of the greenback to 85 in April, 1873. Next the contraction of credit reacted on the United States themselves. The fall of values (Sauerbeck's index number measuring prices in England fell from 111 in 1873 to 102 in 1874) combined with the sudden subsidence of the stream of capital which had flowed from Europe to America, led to a violent crisis in September and October, 1873. There were numerous failures and a general suspension of payments *even in paper* by the banks. Legal tender notes for a time commanded a premium over certified cheques of from $\frac{1}{2}$ to 3 per cent. In the rise of the greenback from 86·7 in August to 91·8 in October we have an example of the effect of an *internal* crisis on the value of the monetary unit. To meet the urgent needs of the banks for legal tender money, the issue of greenbacks was increased by \$26,000,000 to \$382,000,000. Partly as a result of this measure, partly as a result of the progressive contraction of credit and fall of gold prices in Europe, the greenback after remaining at 90 in 1874, fell away in 1875 (touching 85·4 in June). In 1876 and 1877, the issue of greenbacks was reduced again to about \$350,000,000, and the natural economic expansion of a new country steadily raised the value of the notes. There was a good harvest in 1877 and a still better in 1878, and a very large export of wheat helped on the steady progress towards resumption. The greenback was at 89·2 on the 1st July, 1876, 93·46 on the 1st January, 1877, 94·5 on the 1st July, 1877, and 97·2 at the end of 1878. In the course of 1878 it reached par.

The history of the greenback supplies an interesting parallel in some respects to that of the Bank-of-England note

in the period 1815-21. In both cases there is an easy but deceptive appreciation which really only reflects a credit expansion in the gold-using countries; a reaction caused in the first instance by the contagion of the credit expansion, and then intensified by the outbreak of a crisis abroad; a crisis at home precipitated by the fall of prices; and finally a rise of the note to par facilitated by a relief of the stringency abroad. The extreme difficulty in restoring the value of a depreciated currency at one time, and the ease with which this can be done at another are explained by the changes in the value of gold. The periods of depression in 1815 and 1818-19, in 1866-68, and 1874-76 were very unfavourable, the periods of expansion in 1816-18, 1819-20, 1869-73 were very favourable, to a paper currency. It must be admitted that the rise of the greenback in the years 1877-79, when Europe was still in a state of depression, calls for some further explanation. But the causes mentioned above, the contraction of the currency, the natural growth of business in a new country and the exceptionally productive harvests probably supply a sufficient explanation. The two periods 1869-72 and 1876-79 were both favourable to the appreciation of the greenback, notwithstanding that the first was marked by an exceptional excess of imports and the second by an exceptional excess of exports. From 1869 to 1872 the imports averaged 532 and the exports 417 millions of dollars; from 1876 to 1879 the imports averaged 463 and the exports 678 millions. No more striking example could be desired of the danger of leaping to a conclusion from the bare fact of a "favourable" or "unfavourable" balance of trade. If the unfavourable balance is due to an influx of foreign capital, it has as "favourable" an effect on the foreign exchanges as the favourable balance due to an exceptionally large volume of production.

In one important respect the position of the United States after the Civil War differed from that of England after the Napoleonic wars. The British debt was a sterling debt; the liabilities were payable in whatever medium might be legally recognised for the payment of debts in England, whether gold or paper. The United States debt was a *gold* debt, and

though this view did not pass unchallenged it was soon adopted beyond dispute. Consequently no change in the monetary standard would of itself have affected the good faith of the nation as a debtor.

The return to specie payments in 1879 did not finally settle the standard. During the prolonged régime of inconvertible paper the Americans had made the very dangerous discovery that an expanding currency makes for active trade, high profits, and good employment. It was largely due to the prevalence of inflationist views that the Government note issue was not contracted, and that the resumption of cash payments was not consummated till the natural growth of business had absorbed the redundant paper. And even before this had actually occurred, a new question had been raised by the inflationist party. The rapid displacement of silver by gold in Germany in 1872 and 1873 had led all European countries where silver was in circulation as the metallic standard, either in conjunction with gold or alone, to defend themselves against the flood of redundant silver by suspending the free coinage of silver. This general demonetisation of silver had completely upset the time-honoured ratio of $15\frac{1}{2}$. The ratio was rising rapidly, and in 1878 had reached 18. The American inflationists discovered that the United States had almost by accident participated in the general movement. In 1873 an inconspicuous Coinage Act had quietly dropped the silver dollar out of the list of standard coins. In fact, the transition from a nominally bimetallic but practically a gold standard to a legal gold standard had been effected in the United States, just as it had in England in 1816, at a time when the general use of paper money made coinage legislation for the moment of academic interest only.

In the United States the inflationists, who favoured a lowering of the standard of value on its merits, were soon in alliance with the silver interests. For the production of silver is itself an important American industry. The silver dollar was restored to its position of unlimited legal tender, but instead of the free coinage of silver at the ratio of 16 to 1, a limited monthly coinage of silver was provided for. Every

month a sum of not more than \$4,000,000 and not less than \$2,000,000 was to be spent on the purchase of silver for coinage into dollars. At the then price of silver \$2,000,000 worth would be coined into about 2,400,000 standard dollars, and the minimum amount of coinage provided for was thus about \$29,000,000 a year. This was a very considerable annual addition to the circulation. The whole currency of the country consisted of \$350,000,000 of greenbacks and \$300,000,000 of National Bank notes, together with a moderate amount of gold which had remained in circulation (in defiance of Gresham's law) in the extreme West. An annual addition of \$29,000,000 to this total might easily threaten the gold standard. As it turned out, however, the silver coinage was for some years absorbed without difficulty. The year 1879 saw the turning point in trade. There was a sharp rise of prices in the latter part of that year which continued in 1880. Credit expanded and the United States, now on a gold basis, participated in the world movement. The importation of foreign capital revived, and notwithstanding the continuance of good harvests, the excess of exports began to diminish, (though even at the height of the movement in 1882 there was not an actual excess of imports such as marked the period before 1873). The tendency which in 1870 had expended itself in raising the value of the paper currency, now required a great addition to the metallic currency. The statutory silver coinage was quite insufficient, and large importations of gold became necessary, amounting in the two years 1879-80 and 1880-81 to \$175,000,000, although, of course, the United States was one of the great gold-producing countries of the world. In 1882 with the French crisis in January came the reaction in Europe, and the stream of gold stopped. The next few years were a period of severe depression. Credit contracted, prices fell, and unemployment was rife. The United States currency was saved, however, from the great strain which this state of affairs might have been expected to place upon it by the steady contraction of the National Bank note circulation. The note issue of the National Banks had to be secured by United States bonds. The bonds were being steadily redeemed

out of surplus revenue, and, as this process went on and the price of the bonds rose, the profits of issue diminished and the note issue was steadily contracted. In July, 1883, it amounted to \$356,000,000 (having altered but little for several years). In the seven years to 1890 it diminished to \$186,000,000. The total decrease of \$170,000,000 was spread very evenly over the whole period. In the same period of seven years the coinage of silver dollars amounted to \$222,000,000, so that the net addition to the currency under these two heads was the very moderate amount of \$52,000,000, and even this was set off by an accumulation of a gold reserve, out of surplus revenue in the Treasury. In fact, during the years of depression, 1882-86, the uncovered silver and paper money actually diminished, and the currency requirements of a growing community (notwithstanding the depression) necessitated the retention in the country of nearly all the output of gold from the mines, the net exports being trifling. The beginning of a revival of trade came in about 1887. On this occasion it was the New World which led the way. As in the years 1869-72 and 1879-82, there was again a great spurt of railway construction in the United States, but this began in 1886 before trade in Europe had begun to revive. Imports into the United States practically equalled exports in 1887 and exceeded them by \$33,000,000 in 1888, while the excess of exports was small in 1889 and 1890. But the great imports of gold which marked the years 1879-82 were not repeated. Though the imports in the two years 1886-87 and 1887-88 amounted to \$59,000,000, nearly all of this was exported in the two following years. This loss of gold was a sure sign that the expansion of credit in the United States was outstripping the expansion in the gold-using world generally. As the United States was importing capital on a large scale, we may infer that the excess expansion was very considerable.

The first check to the world expansion arose at the other end of the New World. A perfect orgy of speculative investments had been taking place in the Argentine Republic. Here likewise the balance of foreign trade may be taken as a test. For some years up to 1880 there had been a moderate excess

of exports over imports. In the five years 1881-85 imports averaged \$77,000,000 and exports \$71,000,000. In the five years 1886-90 the average imports had grown to \$130,000,000 and exports to \$96,000,000. The annual excess of imports, amounting to no less than \$34,000,000, is clear evidence of the large importations of capital, especially when account is taken of the already heavy liabilities of the country for interest on existing foreign capital and for shipping freights, etc. In 1890 the whole structure of Argentine finance collapsed in a welter of corruption and civil disorder. The catastrophe involved the great British accepting house of Baring Brothers, which had underwritten important Argentine issues. In November, 1890, it was learnt that Barings was about to suspend payment. If all the bills drawn upon Barings became waste paper, it was feared that the financial system of the City of London would be involved in irretrievable ruin. The principal London banks agreed with the Bank of England to guarantee the payment of Baring Brothers' liabilities, and as no one bank assumed a greater burden on account of the guarantee than it could certainly bear¹ all danger of panic was averted. But the magic of the trade expansion was gone. Notwithstanding that the gold reserve of the Bank of England was never subjected to any real strain (the precautionary importation of £3,000,000 from the Bank of France proved to be quite superfluous), it was clear that there was no room for further expansion, and thenceforward a tight hand was kept upon credit.

But the check to credit did not extend to the United States. The year 1890 saw two measures which tended to prolong the expansion in that country even after it had ceased elsewhere. The tariff was increased and made more protective, and the monthly purchases of silver were increased from \$2,000,000 worth (or about 2,300,000 ozs. at the then price of silver) to 4,500,000 ozs., against which there were to be issued a new series of treasury notes. An increased protective tariff makes the exchanges favourable. It checks imports, and leaves a

¹ In the end the assets more than covered the liabilities and the guarantors lost nothing.

balance of exports to be paid for. Where there is a gold standard, gold will be imported till the level of prices has been raised to such a point that sufficient additional imports have been attracted or goods have been diverted from export to redress the disparity. And on the top of the tariff came, in 1891, far the greatest wheat harvest that the United States had ever known, 612 millions of bushels being produced as compared with the previous highest of 513 millions in 1884 and 504 millions in 1882. This coincided with a year of scarcity and high wheat prices in Europe, and in the year to 30th June, 1892, grain to the value of \$299,000,000 was exported as compared with an average of \$140,000,000 in the five preceding years.

But for all that, the coincidence of a credit expansion in the United States, artificially sustained by the increased purchases of silver, with a contraction in Europe caused a growing efflux of gold. The export in the year 1890-91 was \$68,000,000. In 1891-92, as a result perhaps of the harvest and the tariff, the export stopped, but in the following year, 1892-93, it was no less than \$87,000,000. Such a state of things could not continue long. The addition to the supply of gold in Europe helped to delay the credit contraction, and the prices of commodities showed no decline in 1891, for though materials had begun to fall, most articles of food rose. But in 1892 came a fall of 5 per cent. (as measured by English prices). If the United States held aloof and refused to contract credit, the export of gold was bound to grow greater with the progressive divergence between American and European prices. Matters came to a head in June, 1893, when there burst out one of the severest financial crises in the history even of American credit. Even in March there had been a premonitory stringency, and the interest on call money had momentarily risen to 50 per cent. On the 29th June it rose to 73 per cent., on the 1st July to 140 per cent.¹ As has happened in other crises in the United States, the National Banks, bound by statute, to maintain reserves equal to a certain proportion of their deposits,

¹ I.e. a commission of $\frac{1}{4}$, $\frac{1}{4}$, and $\frac{1}{2}$ per cent. per diem, plus interest at 5 per cent. per annum.

refused to pay out legal tender money. They thought it safer to break their engagements with their depositors, than to transgress this legal requirement or, where a breach of it could not be avoided, to increase the amount of the deficiency. There was a general suspension of cash payments throughout the country, except at Chicago alone. In the sudden dearth of legal tender money some Eastern factories paid their hands in cheques. The evil to be cured was twofold. Credit had to be contracted to the European level; the steady inflation of the legal tender currency by the issue of treasury notes against the purchases of silver had to be stopped. The contraction of credit was effected by the crisis itself. There were multitudes of bank failures, and a violent contraction of industry and of all branches of business. The export of gold was for the moment reversed, and in the second half of 1893 over \$50,000,000 was imported. The Act requiring the purchase of silver was hastily repealed.

But nevertheless the gold standard was not even then beyond danger. It was threatened both politically and economically. The silver party was still active, more active indeed than ever. The price of silver had been raised in 1890 (partly by the increased purchases of silver and partly by the general rise of gold prices) from 42d. an ounce to more than 50d. In 1892 it had fallen below 40d. The crisis of 1893 and the repeal of the Silver Act brought it down to 34d. In 1894 it fell to 28d. At the same time there was an intense depression of trade in both Europe and America. Just when the silver-producing interests were being subjected to such heavy losses, the inflationists could point to the dire results of a contracted currency.

At the same time the greatest difficulty was experienced in maintaining the gold standard at all. The silver purchases had ceased, but the fall of gold prices in Europe continued till 1896, and in spite of the effects of the crisis the contraction of credit in the United States was soon found to be insufficient to keep pace with it. The export of gold recommenced, and for the two years 1894 and 1895 amounted to no less than \$150,000,000. No central control of credit

existed, and the only way in which a more rapid contraction of credit could be enforced was by restricting the supply of legal tender money. The Government proceeded to raise gold by borrowing, but the gold was let out as quickly as it was borrowed and the circulation of paper money was not reduced. In 1896 there was a Presidential Election. The Democratic candidate, Mr. Bryan, stood for the unqualified free coinage of silver. The price of silver being then 30d., the value of a silver dollar was a little over 50 cents. Had Mr. Bryan won the election, and restored the free coinage of silver, the change in the standard of value would have been prodigious, even if every allowance be made for the consequent changes in the values of gold and silver. He and his party were decisively defeated, and the gold standard was secured. Trade was already reviving. The vast supplies of gold acquired by the great European banks of issue since 1893 were at last beginning to take effect in a new expansion of credit and a new activity of business. In 1896 the export of gold stopped, and notwithstanding a large increase in the output of the American mines, the imports of the three years, 1896-97 to 1898-99, amounted to no less than \$200,000,000. In 1900 an Act was passed definitely establishing the gold standard.

It is as true of the history of the silver question as of the history of the greenbacks that it cannot be fully understood without taking into account the variations in the international value of gold. The Silver Act of 1878 came at the beginning of a period of trade activity, which enabled the country to absorb the monthly quota of silver without difficulty, and required large imports of gold to supplement it. During the depression which followed, the fortuitous contraction of the National Bank note circulation made room for the silver. It was only when the ensuing spell of good trade culminated in the belated crisis of 1893 that the strain of the redundant silver began really to be felt. Just when the loss of gold was beginning to be serious, trade turned the corner. In 1896 world prices began to rise, or, in other words, gold became cheaper, and the gold standard was saved just at the moment when the political opposition to it was decisively defeated.

CHAPTER XIX.

THE GOLD STANDARD (*Continued*).

ENGLAND after the Bank restriction and the United States after the Civil War both returned to a gold standard which had been substantially in operation before the issue of irredeemable paper had begun. In both countries there was in a sense a change of standard, because both gave legislative recognition to the gold standard during the paper régime. Those countries of Europe which were in 1872 and 1873 in the enjoyment of a metallic currency, whether bi-metallic or silver, and which followed the lead of Germany in suspending the free coinage of silver and passing to a gold standard, preserved the continuity though not the identity of their unit of value.

But there were some countries which, either because they were using irredeemable paper at the critical period or for other reasons, delayed making the transition from a silver to a gold standard until the old stability of the ratio between the two metals had vanished. These were faced with the problem of selecting a new metallic standard. Many examples might be cited, but, as it is no part of my purpose to write a universal history of currency, I will confine myself to describing three only of the most important, namely, Austria-Hungary, Russia, and India.

Austria-Hungary nominally had a silver standard, but in fact had been battling against currency difficulties since 1848. Her experience of inconvertible paper dated back to the Napoleonic wars. The war of 1809 especially exposed her to a greater financial strain than she could bear, and in 1811 an attempt was made to restore order by making a new issue of paper to redeem the old at no more than one-fifth of its face-value. Government obligations incurred since the beginning

of 1809 were discharged on a sliding scale according to the metallic value of the paper florin at the time each debt was contracted (as was done with the Continental Currency of the United States in 1780 and for private debts with the assignats in 1796). But in 1813 the country was again drawn into the war, and new issues became necessary. Heavy depreciation followed. In 1815, during the Hundred Days, 100 florins in silver were worth more than 400 in paper. In 1816 the Austrian National Bank was founded, mainly with a view to the withdrawal of these depreciated notes. A complicated scheme was set on foot for giving the holders partly silver and partly interest-bearing securities, the whole to the value of about 40 per cent. of the face-value. But the notes had not risen in the market to that level, and it was found that the resources of the bank were not sufficient to carry the scheme through. Redemption was suspended in August, 1816, after a seven weeks' trial.

Silver was then obtained by means of foreign loans, and after an interval of preparation the Bank found itself able to redeem notes regularly at 40 per cent. of face-value, though it was still unwilling to assume a legal obligation to do so.

Thus a man with 100 florins in 1811 would have received in exchange 20 florins of the new issue of that year, and for his 20 florins he would have received in 1820 cash to the value of about 8 florins. A drastic change of standard indeed! But it had the advantage that a metallic standard was actually restored, and remained in operation till the revolutionary movement in 1848. That movement, developing as it did into a war between Austria and Hungary, put a severe strain on Austrian finance. Inconvertible paper was again resorted to, and for the next twenty years a succession of attempts to get rid of it were brought to nothing by wars or preparations for war. In 1854-55 came the Crimean War, in which Austria-Hungary, though not actually a combatant, had important interests at stake and was bound to stand by armed. The premium on silver rose at one moment to 40 per cent. With peace it subsided, and the currency was ~~actually at par when there followed the disastrous war in Italy~~

against Napoleon III., and the premium rose as high as before. In 1864 came the joint intervention with Prussia against Denmark, and in 1866 the war against Prussia, and also the Overend & Gurney crisis in England. The premium on silver florins which had been reduced in February, 1866, to 1·75 per cent., rose in the same year to 30 per cent. There followed a period of recuperation, during which, however, the paper money (like the American greenbacks) did not at first improve very substantially in value. In the first year of peace indeed the premium fell to 23·95, and in 1868 to 14·43, but in the three years 1869-71 it averaged 21 per cent. It was only in 1872 (much later than in the United States) that the recovery became really marked, and in 1873 the crisis occurred. As in the United States later in the same year, the crisis had little effect on the value of the currency. The extreme stringency characteristic of a crisis, which might have raised the paper florin to par, was staved off by a relaxation of the regulations governing the note issue. The National Bank had been subjected since 1863 to the same system of a fixed fiduciary issue, as had been applied to the Bank of England by the Act of 1844, the fixed issue being 200,000,000 florins, and any excess over this sum having to be covered by silver (or gold). The extension of the note issue, combined with the interruption of the importation of foreign capital, prevented any considerable appreciation of the currency, and for two or three years the exchange on London remained at about 111 florins to £10 as compared with a par of 102·15. In 1876 and 1877 however the growing depression of gold prices, combined with the threat of war in the Balkan Peninsula, caused a renewed depreciation and in the latter year the exchange averaged 122·17. For Austria-Hungary, as for the United States, the revival of trade in 1879 brought an appreciation of the currency, and the exchange fell to 117·30. This was still far from the former par value. But the exchange on London measured the value of the florin in *gold*, whereas the florin still nominally meant $\frac{1}{10}$ of a kilogramme of pure *silver*. In 1879 the average price of silver was 5 1*½*d. an ounce, and at this price the silver in a florin was worth 9·79d., so that 121·26 florins

would be equal to £10. In fact, the florin as a monetary unit was already worth more than the silver it contained, and the metallic value of the currency was restored. If the coinage laws remained unchanged and silver could be coined without limit into florins on application at the Mint, silver would immediately become the standard of value, in fact as well as in theory, as it had been from 1820 to 1848. But the link which had formerly connected the values of silver and gold had been broken. To restore the silver standard would have been to abandon all stability in the exchanges with the gold-using countries, which included nearly all the most important trading nations of the world, outside Asia. It was decided to close the Mints to silver, with a view to the eventual adoption of a gold standard. Even before the introduction of the gold standard into Germany and the consequent collapse of bimetallism the intention had been formed of adopting a gold standard in Austria-Hungary. Gold pieces of 8 and 4 florins, equivalent to 20 and 10 francs, were coined in 1870, and at the same time the National Bank began to accumulate a reserve of gold and foreign bills. It was natural, therefore, that in 1879, when the decision had to be taken, the Mints were closed to silver. The result was that for thirteen years the monetary unit was a paper florin with no definite metal value. It had been cut adrift from the old silver unit, and the corresponding gold unit at the old ratio of 15½ (which would have made the florin exactly equal to two German marks) had never been expressly adopted. The period of good trade and relatively high gold prices, which began in 1879 lasted till 1882. In that year a financial crisis in Paris heralded the reaction, and the Vienna Exchange on London, which for three years had averaged between 117 and 118, rose to 119.6. It rose steadily till the depreciation of the florin reached a maximum in 1887, when 126.61 florins were equal to £10, and, still following the course of trade and of gold prices, the exchange then fell again to 124.22 in 1888, 119.55 in 1889, 116.05 in 1890, and 116.80 in 1891. So steady an appreciation of the florin seemed to promise an opportunity for fixing its gold value and introducing a gold standard as a

permanency. It was too much to hope that the old par of exchange of 102·15 would be reached within any reasonable time, but it seemed safe to adopt a value corresponding to the average exchange over a series of years. A value which worked out at 120·087 was decided on. The new gold unit was to be the crown, which was to pass for half a florin, and a kilogramme of fine gold was to be coined into 3280 of these crowns. This made the par of exchange on London 24·0174 crowns to £1, and on Berlin 85·0061 marks to 100 crowns. The legislation providing for the new coinage was passed in 1892. The date fixed for the definitive introduction of the gold standard was the 1st January, 1900, and in the interval steps were to be taken to withdraw all the Government legal tender notes and to replace them so far as required with silver subsidiary coin, and for the rest with notes of the Austro-Hungarian Bank based on gold. The Government took steps to obtain gold by means of foreign loans. But the first few years of the preparatory period were disappointing. Indeed the year 1892 was an unfortunate one to choose. The expansive movement, which had been the true cause of the steady appreciation of the florin between 1887 and 1890, had already passed its zenith in Europe, although it had gained a further lease of life for a year or two in the United States, owing to the combination of an increase of the tariff, a splendid harvest and an inflation of the currency through the silver purchases. Gold prices, as measured by Sauerbeck's index number, were five per cent. lower in 1892 than in 1891. Unemployment in the English trade unions rose from 2·1 per cent. in 1890 to 3·5 in 1891 and 6·3 in 1892. Vienna exchange on London rose ominously from 116·80 in 1891 to 119·29 in 1892, and by the end of the year was slightly above the new par. In 1893 the exchange grew more unfavourable, and after the crisis in the United States rose to a premium of more than 5 per cent. For the year 1893 the premium on sterling averaged 3·1 per cent. and for the following year, one of extreme depression and very low prices, it averaged 3·8 per cent. There was a recovery in 1895 but it was not till 1896, the same year that saw the end of the currency difficulties in

the United States, that the premium was wiped out. Thenceforward, thanks to the period of prosperity and rising prices which prevailed in the gold-using world, the establishment of the gold standard was plain sailing. Gold prices rose in the four years 1896-1900 by about 25 per cent. The same causes which had brought down the exchange from 126·61 in 1887 to 116·05 in 1890 were again at work, but as the Austro-Hungarian Bank was now prepared to buy sterling at a fixed price the exchange could not drop far below its new gold par of 24·0174 crowns to £1 (corresponding to 120·087 florins to £10). There resulted a great strengthening of the gold resources of the Bank which rose from 488 millions of crowns in 1895 to 920 in 1900 (inclusive of foreign bills payable in gold). The country then reaped the benefit of its struggle against adverse currency conditions in the years of depression 1893-96. It was ready to face the next trade reaction with ample resources to maintain the parity of its new gold unit. And in fact the gold standard weathered all storms till the outbreak of war in 1914, when it was swallowed up along with many more important human institutions and possessions in the maelstrom.

The course of events in Russia was in some respects similar to that in Austria-Hungary. Russia had her experience of an escape from a hopelessly depreciated paper currency by cutting the knot in 1839, when the existing notes were redeemed by means of a new issue at the rate of 2 roubles for every 7 of the old. Russia, too, had her troubles in the middle of the nineteenth century; not only the disastrous Crimean War but the Polish rebellion contributed to her currency embarrassments. The paper rouble had nearly touched its silver par (4 francs, or 38d.) in 1863, but thereafter fell away and oscillated between 30d. and 33d. (with occasional falls below 30d. under the stress of political or financial crises) until the recrudescence of war over the Eastern question in 1876-78. In the autumn of 1877 it fell to 22½d., and though early in 1878 the expectation of peace produced a momentary rise to 26½d., it fell again to 22½d. and did not revive till the general rise of gold prices at the end of 1879 brought it up to

25*½*d. and early in 1880 to 26*½*d. With the flagging of trade after 1882 the rouble declined, and after a slight recovery in 1884-85, due perhaps to a contraction of the note issue (from 973,000,000 roubles in 1883 to 900,000,000 in 1885) it was at a little more than 23d. in 1886 and fell to 21d. in 1887, and momentarily even below 20d. early in 1888. In the latter half of 1888 began that revival of trade which tempted Austria-Hungary to embark upon a gold standard. Its effect was even more striking on the rouble than on the florin. By September the rouble had reached 26d. By the autumn of 1890 it had risen for a short time to 30d., and for 1890 it averaged 28d. The Russian Government was already accumulating a stock of gold and of gold balances abroad. But though the preparations continued, the new standard was not immediately fixed, and the rouble remained without any defined par value. In 1891 there was a rapid fall, and by January, 1892, the rouble was barely worth 23d. From this point, however, there was a recovery. This recovery, at a time when gold prices were falling calamitously, and other paper currencies were depreciating in proportion, calls for some explanation. This is to be found in part in the failure of the crops in 1891, which exaggerated the collapse of the exchange in that year, and left room for some recovery in spite of the adverse conditions abroad. An important factor was probably the increase of the Russian tariff (already highly protective) by 20 per cent in 1891. By 1893 the rouble was settling down to a rate of approximately 25d., and the Russian Government determined to take measures to steady its value. Like the florin in 1879, the rouble was now close to its nominal silver parity, and the free coinage of silver was suspended in January, 1893. In the following year the Government resorted to what is now called an exchange standard. They drew bills payable in three months on their various agents in foreign countries, fixing the rate of exchange at 46*27½* roubles for 100 francs.¹ They then announced that the State Bank

¹ See Report of Fowler Committee on Indian Currency, Appendix No. 59 (Memorandum by Mr. Hahier). The old rouble had been almost exactly 4 francs. As 100 francs are equal to 8*½* marks, 25 of the old roubles were worth at par 8*½*

was prepared to sell these bills at this rate or to buy others at the same rate, and that they were obtainable, at the Chancellerie de Crédit (Office of the Ministry of Finance in St. Petersburg), and at the offices of the bank in a certain number of towns. In this manner a limit was fixed beyond which the market value of the rouble could not fall. The Bourse news had an announcement every day on the outside sheets of the rate at which the Government sold or bought bills. Like Austria-Hungary and the United States, Russia found the preservation of her standard facilitated by the trade revival which began in 1896. The new gold unit was fixed in December, 1895, the gold coin of 5 roubles (the half-imperial) being declared equivalent to $7\frac{1}{2}$ paper roubles, and the Bank undertook to pay for notes at this rate till further notice.

The existing gold coins were based on the old ratio of 15 $\frac{1}{2}$, which made the rouble worth 4 francs, or 38d. The new rouble was two-thirds of the old, and was therefore worth 2 $66\frac{2}{3}$ francs or 25 $\frac{5}{6}$ d. An ukase of January, 1897, authorised a coinage of the old weight and fineness of the imperials and half-imperials, stamped with the new denominations of 15 and $7\frac{1}{2}$ roubles, and 5 rouble pieces followed in November, 1897.

Thus Russia and Austria-Hungary floated easily into the gold standard on the rising tide of gold prices. Both had started with their paper depreciated in relation to its nominal value in silver. Both had seen silver fall till a return to an effective silver standard would have been easy. Both had rejected the silver standard, and had passed through a period when their paper exceeded, in value the only metallic unit to which it had ever been bound, but still fell short of the gold value corresponding to that unit in foreign monetary systems. The florin was worth more than $\frac{1}{50}$ of a kilogramme of fine silver, but was worth less than 2 marks. The rouble was worth more than $\frac{1}{50}$ of a kilogramme of silver, 900 per mille

marks, and 100 marks were worth 30 $86\frac{2}{3}$ roubles. The new rate was 50 per cent. higher (subject to a very small margin). It was equivalent to 25 $\frac{5}{6}$ d. or, in the form in which the exchange on London is now usually quoted, 94 58 roubles to £10.

fine, but was worth less than 4 francs. Both countries fixed new gold values for their monetary units approximating to their market values. Neither debtors nor creditors could complain of such a decision; debtors might have had to pay in gold at the old ratio; creditors might have had to accept payment in silver.

The case of India differs from those of Russia and Austria-Hungary in that there was no period of irredeemable paper intervening between the silver and the gold standard. In China and the other neighbouring countries of Asia the silver standard persisted, despite the depreciation and the consequent confusion of the exchanges with gold standard countries. The relations between India and England, however, are so intimate that this state of things began to cause serious inconvenience. At the ratio of $15\frac{1}{2}$ to 1 the rupee, weighing $\frac{2}{3}$ of an ounce of silver $\frac{11}{12}$ fine, had been worth about 1s. 11d. As silver fell the value of the rupee fell, and in the financial year 1878-79¹ the average rate realised by the bills sold by the India Office was only 1s. 7 $\frac{1}{2}$ d. For a year or two the fall was arrested, and in 1884-85 the rate was still as high as 1s. 7 $\frac{1}{2}$ d., but then it fell again rapidly and in 1888-89 averaged only 1s. 4 $\frac{1}{2}$ d. A recovery to 1s. 6d. in 1890-91 (the year of the Sherman Act for the purchase of silver in the United States) proved to be transitory, and by 1892-93 the rupee had dropped to 1s. 3d. Nor did there seem to be any prospect of its stopping there. Silver had fallen to 38d. per oz. notwithstanding the silver purchases in the United States, and it seemed likely that these silver purchases would not be continued much longer. The fall in the rupee was embarrassing in two ways. It destroyed the equilibrium of the budget, since an important part of the revenue of India was absolutely fixed in rupees, while the Government had heavy liabilities regularly payable in sterling in London. But, what was ultimately more important, the instability of the exchanges introduced an element of uncertainty into all Anglo-Indian trade. The Government, acting on the advice of a Committee of which Lord Herschell was chairman, decided to stop the free coinage of silver, and, with a view to

¹ The year from 1st April to 31st March.

arriving ultimately at a gold standard, announced that British sovereigns would be exchanged on application into rupees at the rate of 15 rupees to £1., that is to say 1s. 4d. a rupee. This undertaking, of course, could not in itself prevent the rupee from falling though it would prevent it from rising above 1s. 4d. The suspension of the free coinage, however, would sooner or later tend to raise the rupee, and therefore there was reason to anticipate that eventually the rate of 1s. 4d. would become operative. From June, 1893, when the Mints were closed, the value of the rupee was determined just as if it were an inconvertible legal tender note. The total quantity of currency in the country was fixed, and so long as the Mints remained closed there was no way of increasing it except the importation of sovereigns, and so long as the exchange remained below 1s. 4d. sovereigns would not be imported. Nevertheless, the exchange continued at first to fall. In 1893-94 it averaged 1s. 2⁵d., in 1894-95 1s. 1¹d., in 1895-96 1s. 1⁶d. But in 1896-97 it rose to 1s. 2⁴d., in 1897-98 to 1s. 3³d., and at last in 1898 was at 1s. 4d. Thus after five years the system foreshadowed in 1893 was within reach. Another Committee was then appointed, presided over by the late Lord Wolverhampton (then Sir Henry Fowler). This Committee recommended that the sovereign should be made legal tender in India, and suggested measures for the purpose of encouraging the circulation of gold in the country. They contemplated a system under which the rupee would become a mere subsidiary coin, but they recognised that for the time being it was impracticable to limit the amount for which rupees were to be legal tender. They must continue to be coined so far as their place in the currency could not be filled by gold, but the Committee suggested that the profit on the coinage of rupees (which were by that time worth considerably more than the silver which they contained) should be accumulated in a separate reserve in gold, to be drawn upon as an alternative form of Government remittance from India to England, whenever the exchange should fall below specie point.

The Indian Government accepted these recommendations. British sovereigns and half-sovereigns were made legal tender

in 1899, and an attempt was made to put these coins into circulation by redeeming notes and making other Government payments in gold unless the payees expressly asked for silver. But it soon became clear that the gold was not wanted. The Indian Government was still bound by its undertaking to pay out rupees in exchange for gold, and as fast as the gold was paid out it was presented for exchange into rupees. The effect was to substitute gold for rupees in the reserve held by the Government against the note issue, and the depletion of the rupees in that reserve soon became embarrassing. If in default of rupees it became necessary to insist on redeeming the notes in gold the credit of the notes might be ruined. Indeed a momentary failure of the supply of rupees at Calcutta in April, 1900, actually drove the notes to a discount of $\frac{7}{16}$ per cent and gold itself to a discount of $\frac{1}{2}$ per cent. The remedy, of course, was to coin more rupees, and this was done. In the financial year 1899-1900 rupees were coined to the amount of 132 lakhs, and in 1900-1 1694 lakhs,¹ making the large total of 1826 lakhs, or £12,000,000. This raised the question of the accumulation of the reserve of gold, as recommended by the Fowler Committee, out of the profits of coinage. The failure of the attempt to force gold into circulation had enhanced the importance of this recommendation, and the recommencement of the coinage of rupees called for an immediate decision on the point. It was settled that the reserve should be created. Thereupon it was realised that if this reserve was ever to be used it would be wanted in *London*. To accumulate gold in India would, therefore, be an unnecessarily cumbrous proceeding, as the gold would probably in the first instance have to be attracted or at any rate diverted from the London market and would then have to be sent back to London whenever needed. It was decided to accumulate the reserve in London, and to hold it in the form of interest-yielding securities. This reserve, the gold standard reserve as it came to be called, was only to be used if the rupee began to

¹ A lakh is 100,000 rupees and a crore 10,000,000. So long as the rupee was about 2s., a crore meant about £1,000,000, and a lakh £10,000. With the rupee at 1s. 4d., they are £666,666 13s. 4d. and £6666 13s. 4d. respectively.

fall below the prescribed value of 1s. 4d. (or rather a slightly lower value, say 1s. 3 $\frac{1}{2}$ d., corresponding to the export specie point.)

For the next few years there was a continual demand for rupees—moderate at first and steadily growing greater. The Government received its revenue in rupees in India, and had to spend a considerable part of it in sterling in London, and for many years the practice had been to sell bills or telegraphic transfers on India in London. In fact, the Government came into the foreign exchange market to offer rupees in India in exchange for pounds sterling in London. So long as India had a system of free coinage the Government merely sold just so many rupees in the year as would supply it with the money needed in London. But now it was not the sum sold that had to be fixed but the rate of exchange. If there was a demand for rupees and the exchange was tending upwards, the Government had to sell more rupees than were sufficient to supply its London requirements. Its balances of rupees became depleted and it had to replenish them. This could be done by buying silver and sending it to India to be coined. The silver was bought in London, and was paid for from the London balances, already swollen as much as the rupee balances were depleted. The rupees coined were added to the Indian balances, and the London balances were reduced by the sum paid for the silver, and *also* by the difference between this sum and the value of the rupees, the profit on coinage, which had to be paid over to the gold standard reserve. Thus the London balance (apart from the gold standard reserve) was diminished by exactly the amount by which the Indian balances were increased. If the demand for rupees was so insistent that the Indian balances could not meet it, a reserve of rupees existed in the currency reserve, held against the note issue. The purchase and transmission of silver and the process of coinage took time, and in case of an unforeseen demand for rupees, in the form of applications for bills in London, there might not be time to replenish the Indian balances with freshly-coined rupees. But the rupees in the currency reserve could only be drawn upon, just as they

were drawn upon in 1900, if gold was deposited in their place. The note issue was based on the English fixed fiduciary issue system. There was a holding of securities to the value of 10 crores (raised in 1906 to 12 and in 1912 to 14), and all notes in excess of that amount had to be covered by rupees or gold. The gold might be either in India or in London, but wherever it was situated it had to be actual metal set apart; a bank credit payable in gold did not comply with the law. As it was sometimes awkward to have to withdraw gold from the Bank of England for this purpose, it was decided in 1905 and 1906 to hold part of the gold standard reserve in the form of silver, the amount being fixed at 6 crores or £4,000,000. Throughout the period 1901-7 rupees were being coined, in moderate amounts at first, and then in very large amounts, and the gold standard reserve which was built up out of the profits of coinage was steadily increasing. Notwithstanding that in 1907 half the profits were diverted to other purposes, the reserve had reached a total by the end of 1907 of 17½ millions.

Then there occurred a sudden and complete change. The apparently insatiable demand for rupees ceased, and there began an equally insistent demand to reconvert redundant rupees either into gold or into gold credits in London. It became impossible to sell the usual bills on India in London within the prescribed minimum limit of the rate of exchange. The rupees, which would in a normal year have been paid out in India on presentation of the bills, accumulated in the Indian Treasuries, and in order to provide funds in London to meet the English liabilities of the Government, these rupees were paid into the currency reserve, and an equivalent amount of gold standing to the credit of that reserve in London was released. The metallic portion of the currency reserve was thereby maintained according to law unchanged; but gold was replaced by rupees. The gold held in India to the credit of the currency reserve was likewise paid out. At first the Indian Government hesitated to part with it, for it had the option of paying in rupees. But the exchange fell to a slight discount and it was decided to pay out the gold freely.

At last, however, in March, 1908, it became clear that the suspension of the sale of bills and the release of gold in India were not sufficient by themselves to support exchange. It was decided to sell bills on London in India. The bills would be paid out of the sums held in London to the credit of the gold standard reserve, securities being realised for the purpose, and the rupees received for the bills in India would be held in India as part of that reserve. This measure accomplished its purpose. In the next six months bills to the amount of £8,000,000 were sold, reducing the London assets of the gold standard reserve from £14,000,000 to £6,000,000 and increasing the Indian portion from £4,000,000 (6 crores) to £12,000,000 (18 crores) in rupees. By that time the exchange was restored and the demand for the bills ceased, and soon the normal demand in London for the Secretary of State's bills on India revived. A very large quantity of rupees had been withdrawn from circulation. The paper currency reserve, which held 19 crores of silver and 16 of gold on the 31st March, 1907, held 31 crores of silver and 2 of gold on the 31st March, 1909. Thereafter there followed a steady outflow of rupees into circulation, and by 1912 the two reserves together held only 18 crores, and coinage was resumed.

The Indian experience from 1893 may be summarised as follows: From 1893 to 1898, the supply of currency was a fixed quantity and the rate of exchange varied, falling steadily to 1s. 1d. in 1894-95, and rising steadily to 1s. 4d. in 1898-99. Then the rate of exchange became fixed and the supply of currency variable. The actual increase or decrease in the amount of currency (rupees and notes, but not sovereigns) in the hands of the public can be accurately measured year by year, since the rupees once issued may be assumed not to be melted. The increase in the rupees in circulation is obtained by adding the new rupees coined to those in the currency reserve and the gold standard reserve at the beginning of the year, and deducting therefrom those in the reserves at the end of the year. The notes in the hands of the public are equal to the total note issue, less the notes in the Govern-

ment balances and the Presidency Bank reserves. The results of these calculations are as follows:—

ABSORPTION OF CURRENCY (LAKHS).

	Rupees.	Notes.	Total.
1898-99	— 27	251	224
1899-1900	1123	172	1295
1900-1	1275	— 18	1257
1901-2	211	31	242
1902-3	345	259	604
1903-4	1059	328	1387
1904-5	794	36	830
1905-6	1466	417	1883
1906-7	1726	383	2109
1907-8	425	— 385	40
1908-9	— 1557	235	— 1322
1909-10	1403	503	1906
1910-11	392	19	411
1911-12	1066	444	1510
1912-13	1049	271	1320

The inquirer without Indian experience naturally hesitates to interpret these figures. India is, in area and population, and in variety of races and languages, a continent, and one in many respects profoundly different from Europe and the Americas. We must not hastily attribute to the Indians habits and points of view in currency matters which are appropriate to Europeans. Fortunately we have available the reports, evidence, and other documents of three important inquiries into Indian currency and finance, the Herschell Committee of 1893, the Fowler Committee of 1898-99, and the Chamberlain Commission of 1913-14. Here we find the fruits of the experience of the foremost experts in Indian currency and banking.

On reading the official correspondence between the Indian Government and the Secretary of State, relating to the various administrative measures which were taken in the years 1899-1912 for regulating Indian currency (Appendix V. to the Report of the Chamberlain Commission), we find three successive emergencies which had to be met. The first arose in the years 1899 and 1900, owing to the unexpectedly great absorption of rupees into circulation, 2398 lakhs in two years.

The second arose in the years 1905-7 when, after a slack interval, the same conditions recurred, 3192 lakhs being absorbed in two years. The third arose at the end of 1907 from an equally marked return of rupees from circulation, 1557 lakhs being returned in one year. Explanations of each in turn are offered. Writing on the 28th June, 1900, at the height of the demand for rupees, Sir Edward Law, one of the Vice-roy's Council, attributed this phenomenon in part at any rate to the severe famine which had occurred in the season of 1899-1900. "The great bulk of the population is purely agricultural. The agriculturist, in ordinary times, has little requirement for money in the shape of silver coin ; he is himself the producer of a large proportion of the food he consumes, and his other wants which must be satisfied by purchase are trifling. In seasons of famine, however, the situation is changed. The food consumed by the suffering agriculturist must be purchased and paid for with coin, and as credit dries up in times of distress, all his other requirements must equally be paid for in cash.

"I think that we have only to consider the vast numbers who, under ordinary circumstances, produce their own food and enjoy credit for their small purchases and whose wants can now only be supplied by cash purchases, to realise the enormous increase in the circulating medium required to meet this unusual situation."

If we pass to the next period of strain we find quite a different diagnosis of the great demand for rupees. Writing semi-officially on the 18th October, 1906, an official of the Finance Department in India says : "The jute crop has been an excellent one and the prices have risen beyond all expectation ; they were all but double those of last year at the same season.

"There is reason to believe that the drain on the reserve will continue. The cotton harvest promises well, and it would not be safe to anticipate a smaller trade demand for rupees during the winter months than we had to face last year.

"The great activity of trade and the suddenness and magnitude of the demand for rupees which it forces on us have

led us to consider carefully where to turn for assistance in case of need."

Finally, after the third crisis, that of 1908, when the difficulty was not to provide rupees for circulation but to withdraw the hundreds of lakhs of redundant rupees from circulation fast enough to save the exchange from depreciation below the gold point, the Indian Government wrote a despatch to the Secretary of State, dated the 1st April, 1909, reviewing the situation. "During the period from November, 1907, when exchange first fell substantially below 1s. 4d., until the end of January last, we lost 15 millions of our gold. . . . This is the result of a little more than a single year of adverse conditions and of a famine which was more restricted in its area than is frequently the case with similar calamities."

Confronted with these three opinions, the conscientious inquirer may be forgiven if he feels dissatisfied. If so severe a famine as that of 1899-1900 caused the great demand for rupees which marked those years, why did "a famine which was more restricted in its area than is frequently the case with similar calamities" have precisely the contrary result and produce an influx of redundant rupees and a demand for exchange? And why did a famine in 1899-1900 have the same effect as the good jute and cotton crops and the activity of trade in 1906-7?

The Secretary of State, replying on the 2nd July, 1909, to the Indian Government's despatch of the 1st April, pointed out that even if the famine was restricted "it occurred at a time when conditions were exceptionally adverse to the maintenance of exchange. The effect of the famine in reducing India's power of exporting certain articles was felt at a time when the foreign demand for the articles India was able to export was seriously restricted by commercial depression throughout a large part of the world, intensified, if not largely brought about, by the financial crisis in the United States of America."

In fact, the year 1907 had seen the culmination throughout the world of a period of very prosperous and active trade. The prices of commodities (including those jute and cotton crops the success of which promised a demand for rupees in

the autumn of 1906) had risen steadily since the beginning of 1905, the average increase as measured by index-numbers exceeding 15 per cent at the maximum. From about June, 1907, there began a decline in prices and set-back in trade, under the influence of which the credit position in the United States began to crumble. The crash came in October. Sometimes the ebb of trade is a gradual process extending over four or five years, marked at considerable intervals by a series of more or less grave crises in different parts of the world. Occasionally the reaction comes with the force of an explosion, and the whole commercial world passes in an instant from prosperity to extreme depression. This is what happened in the autumn of 1907. Early in 1908 the prices of commodities were already 10 per cent below the maximum of 1907. Bankruptcy, unemployment, and distress were rife everywhere in a few months. The Indian currency system was saved for a short time from the full force of the storm, because it broke in the Indian busy season when there ought to have been a strong demand for rupees. It completely killed the usual demand, and did in fact for a moment send the rupee to a discount. In March, 1908, the busy season being over, it became necessary to sell bills on London in India in order to maintain the exchange. Thus the reason why it was necessary to withdraw 15 crores of rupees from circulation in 1908 was simply that the value of gold in commodities had risen, and but for this reduction in the quantity of rupees in circulation the value of the rupee *in gold* would have fallen.

The famine was relatively of secondary importance, but undoubtedly the Secretary of State was right about the nature and direction of its effects. A famine tends to make the foreign exchanges *unfavourable*. Russia had a somewhat similar experience in 1891-92, when a bad harvest happened to coincide with a decline in trade, and the rouble fell in a few months from 28d. to under 23d. Sir Edward Law's explanation of the demand for rupees in 1890-1900 was no more than an ingenious conjecture. That demand occurred at just such a time of good trade as was to occur again in 1906-7 with the same consequences. As we saw in the cases of Russia,

Austria-Hungary, and the United States, the upward tendency of gold prices, in other words the depreciation of gold, which prevailed from 1896 to 1900 greatly facilitated the maintenance of a paper or token silver currency at a prescribed gold value. The experience of India was very similar to that of those countries. During the years of falling prices which followed the prosperity of 1888-91 the Indian exchange fell, reaching a minimum in 1895. Thereupon it began to rise, till in 1898 it reached the level of 1s. 4d., at which the Indian Government undertook to pay out rupees in exchange for gold. Beyond that point it could not rise, and the same influence, which had been raising the exchange, thenceforward spent itself in increasing the demand for rupees. It is a most striking fact that the period of rising exchange from 1896 to 1900 was marked by two severe famines, one in 1896-97 and the other in 1899-1900, and there was therefore some excuse for the theory put forward by Sir Edward Law. But the theory will not stand criticism for a moment. There may be more cash *transactions* in a time of famine than in a time of plenty, but that does not mean that people will hold larger cash *balances*. It is evident that the peasants who are unable to feed themselves from the produce of their own holdings will tend to pay away their money and to deplete their hoards. The lucky dealers who have food to sell may increase their balances, but taking all classes together the hungry population will on balance have parted with money in exchange for food. But from the experience since 1893 it may be quite safely inferred that famines are not among the most decisive factors in determining the course of the Indian exchange. The effects of the famines of 1896-97 and 1899-1900 at any rate must have been slight since the upward tendency of the exchange was not interrupted by the first nor the demand for rupees by the second.

In India, as elsewhere, the state of the harvest must be regarded as *one* of the influences affecting the exchange. But the predominant influence is the world movement of credit with the consequent alternation of the depreciation and appreciation of gold. The Indian population, it is true, is more primitive than that of Europe. Banking is little developed.

Hoarding is prevalent. Economic motives sometimes work in obscure and unexpected ways. But it remains true that the people can absorb rupees when they can sell at high prices, and they can sell at high prices when gold prices generally are high. The jute and cotton crops of 1906 sold at good prices because credit was expanding in Europe. The Indian growers of those crops wanted to be paid in rupees, while the proceeds of sale were paid in sterling in London. There was a demand for bills, by which the sterling could be transformed into rupees. The American crisis and the consequent shrinkage of demand in the gold-using countries spoilt the market for Indian exports. The disappointed traders had to draw upon their hoards of rupees to meet their expenses, and pay their taxes. A proclivity for hoarding and a slowness in reacting to changes of price would make India not less but more sensitive to currency movements elsewhere. If Indian traders do not raise prices they will sell all the more to Europe ; if they hoard the rupees that they receive and do not spend them they will buy all the less ; their capacity for absorbing rupees will be augmented in both ways.

Even before the shutting of the Indian Mints the currency systems of the East reflected the credit movements of the West. But the effect took the form not of a change in the volume of currency of either India or China but of a change in the price of silver. Silver, like gold, derived its value partly from the fact that it would purchase goods. When an expansion of credit raised the money prices of goods in Europe it raised the money prices of Oriental goods along with the rest. Oriental goods could be purchased with silver and the demand for them was reflected in an increase in the price of silver. Credit in silver countries had not the same power of expansion as in gold countries, and therefore silver prices could not rise in the same proportion as gold prices, unless the quantity of silver currency was increased. From 1873, when the silver market became independent of the gold market, the price of silver regularly rose when trade was good and fell when trade was bad, though there was superimposed upon these fluctuations a general tendency to fall till about 1902, so that the rise

was slight and the fall great. This merely means that the price of silver manifests the same tendencies as the prices of other commodities, and it has continued to do so quite as clearly since 1893 as before.

The essential feature of the gold exchange standard as established in India is the adoption of the rate of exchange as the index of the demand for rupees, and the issue and withdrawal of rupees accordingly. It does not really matter whether the rupees are issued or withdrawn in the process of selling exchange ; by whatever means they are issued or withdrawn the value of the rupee will be determined by the quantity in circulation. After the experience of 1908 some people argued that the gold held in India in the currency reserve, as, when paid out in exchange for rupees, it was not exported but remained in the country, was less efficacious in maintaining the rupee than the gold held in London, which came directly into the exchange market. But the gold in India performed the essential function of redeeming rupees. Even if it was not exported, it was not wanted as currency, but as a commodity, for the demand for gold ornaments was by no means completely interrupted by the adverse trade conditions. In proportion as rupees were locked up in the vaults of the Government, the power of the public to offer rupees in exchange for European goods was impaired, and the unfavourable exchange was redressed. It is a mistake to lay too much stress on the actual means of discharging the trade balance. An adverse trade balance may be *created* by a redundant currency and can be corrected by a contraction of the currency.

The Indian currency system like all others, has been profoundly affected by the war. At the outbreak of war the sudden transformation of England from a lending to a borrowing country turned the exchanges against all the countries which had been financed by her, and in particular against India, the exchange falling to 1s. 3*½*d. To restore equilibrium a contraction of the currency was necessary. Not only could not Council Bills be sold in London, but, as in 1908, bills on London (commonly called "Reverse Councils") had

to be sold in India in order to reduce the redundancy of rupees. The sale of these latter bills began on 3rd August, 1914, to the amount of £1,000,000 a week, and they were sold in the year 1914-15 to the amount of £8,707,000, the reserves held in London being depleted to an approximately equal extent. On the 5th August, 1914, the undertaking to pay sovereigns for rupees had been suspended.

Soon, however, an entirely different tendency supervened. The inflation of the currencies of all the belligerents occasioned a depreciation of gold in comparison with commodities. India was not exposed to the direct strain of war finance, and had no inflated paper currency. If the rupee was to continue on a gold basis, it would have to depreciate along with sterling. The supply of rupees had therefore to be increased. This phase took some time to develop. It was not till September, 1915, that the last bills on London were sold in India. But by the beginning of 1916 the sales of Council Bills had reached a high level. In 1914-15 the circulation of rupees and notes had diminished by 1013 lakhs. In 1915-16 it had increased again by 1827 lakhs. In 1916-17 the demand for currency far surpassed all previous records, rising to 5199 lakhs. As against this there must be set, it is true, a diminution in the absorption of gold, but the gold formerly imported was not for the most part used as currency.

Of the additional currency 787 lakhs in 1915-16 and 1813 in 1916-17 were notes. Yet to maintain the supply of rupees enormous purchases of silver were required. But the price of silver, after having remained low, began to rise in November, 1915, when it reached 27d. per ounce. In May, 1916, it rose to 37d., reacted, falling as low as 28½d. in July, and recovered in December to 37d. In the course of 1917 the price rose above 43d. (which is the melting-point of the rupee) and indeed leapt up with another unstable spurt to 55d. Though this high figure did not last, it became impossible to maintain the exchange at so low a figure as 1s. 4d.; devices for keeping it down by agreement among the banks and for controlling the supply of silver proved ineffective. At last it was decided to raise the rate of exchange for Council Bills to 1s. 5d. and in

1918 to 1s. 6d. At this figure it remained, thanks to supplies from the United States silver reserves, and to the limitation of price to 101½ cents per ounce fine, till in May, 1919, a free market was restored and the rupee had to be raised to 1s. 8d. Thus the exchange standard broke down. The cause was simply the rise in the world price of silver along with the prices of other commodities, or rather the *fall* in the silver price of gold.

Meanwhile measures were taken to give greater elasticity to the note issue. In 1916 the fixed fiduciary issue was raised from 1400 to 2000 lakhs. In 1917 the system of a fixed fiduciary issue was practically abandoned, the securities being increased by the purchase of British Treasury Bills to 4849 lakhs. In 1918 the minimum denomination of the notes was reduced from 5 rupees to 1 rupee—a measure which might have saved the exchange standard had it been adopted at an earlier stage and had the conservatism of the population admitted of a wholesale substitution of paper for coin as the accepted means of payment.

CHAPTER XX.

AFTER THE WAR.

As the financial pressure and commercial restraints of war conditions are relaxed, the question of a change or restoration of the monetary standard will become one of great practical moment all over the world.

In the year 1914 the world had reached a remarkably complete and self-consistent currency system. After many difficulties and vicissitudes gold had been adopted as the sole standard of value in nearly all the countries of any commercial importance. China still retained a silver currency. Some countries of Latin America had not succeeded in tying down their paper to a fixed gold value. Mexico, in the midst of revolution, had lapsed from a scientific gold standard which had been in effective operation a few years before. Spanish paper money was at a moderate discount, subject to slight fluctuations. With a few other exceptions of trifling importance the gold standard, which in 1870 was almost confined to England, was universally established, and there seemed every prospect that business would continue untroubled by currency complications.

Then came the war. The war has injured the gold standard in three distinct ways. First, it has driven those combatants who have been least able to stand the financial strain to convertible paper, which has depreciated. Secondly, it has displaced an enormous quantity of gold from circulation which, with the new gold from the mines, has had to be absorbed in a comparatively restricted area where gold is still used for currency purposes. This second process has made

itself felt in a remarkable depreciation of gold as compared with commodities, and has led a few neutral countries (Sweden and her associates, Norway and Denmark, in the Scandinavian system, and also for a time Spain) to suspend the free coinage of gold and the free grant of credits in exchange for gold. Thirdly, the war has interposed the greatest difficulties in the way of the free movement of gold. Not only does the cost of insuring against war risks (if insurance is possible at all) add directly to the cost of transit, and the limit on the amount that can be insured by one voyage reduce the rapidity of gold movements, but there are many indirect discouragements. Belligerents have all been anxious to retain their stocks of gold, and, if possible, to acquire fresh stocks from abroad. Apart from its direct power of purchasing commodities, a supply of gold may in an emergency be the one safeguard against an act of bankruptcy. Neutrals, even those who have not refused to sell any further credits for gold have been unwilling to receive further supplies of a metal of which they have a super-abundant stock. And while belligerents have been unwilling to part with gold and neutrals have been unwilling to receive it, the exporter of gold from the former to the latter (even if the traffic is not definitely prohibited) has found himself required to prove that the gold will not find its way by any means into the hands of an enemy.

There results a curious situation. Whereas in time of peace a rise in the price of foreign currencies $\frac{1}{2}$ per cent. above par is usually enough to cause an efflux of gold, during the war a rise of 5 or even 10 per cent. has had little or no effect. Even when legally the market for gold has been perfectly free, dealers have not cared to expose themselves to the ill-will of their compatriots and to the suspicion of the Customs authorities, in order to sell gold at a profit to neutral banks of issue which have been themselves reluctant to buy it. For the time being gold has ceased to be an important means of remittance, and there are no pars of exchange except where Governments have agreed so to regulate the creation of credits as to establish a purely conventional par, such as that of \$4.76 to the pound between New York and London, which, after being

maintained since 1915, has recently been relinquished in favour of free conditions.¹

This regulation of the exchanges is an application of the exchange standard, which has thus acquired a new importance, and is likely to play a great part in the future. If under the pressure of war finance the exchanges became unfavourable to one of the belligerent countries, the remedy was to borrow abroad and to offer the foreign credits so acquired to those who desired to remit. Prices of commodities were raised by the inflation of the currency, and if the exchanges were artificially maintained at a prescribed level, prices in terms of foreign currencies were equally raised. Imports from abroad were thus attracted, and in order to preserve the assumed par of exchange the amount borrowed abroad had to be equal to the excess of imports which had to be counteracted. The application of the system is very much facilitated by the fact that the borrowing abroad relieves the financial tension at home and thus enables the war expenditure to be financed with a smaller degree of inflation. At the same time the constant raising of credits tends to induce some degree of inflation abroad, and so still further eases the exchange position.

What is to be the future international standard of value and medium of payment? Is there to be a general return to the gold standard? If so, will those countries whose paper money has depreciated restore their former monetary units, or will they establish new units representing more nearly the equivalents of their depreciated paper in gold? We cannot lay down the law as to what will be done or what ought to be done, but without pretending to make an exhaustive investigation we can explore some of the methods of restoring or altering the standard and some of the consequences.

First, as to the *restoration* of the standard. This may mean one of two things. The value of the paper money may be gradually raised, by a contraction of credit or other means, till it equals its face value in gold; or debts may be made payable in gold at the old rate, and the paper money be made to

¹ Freedom in the Exchange on New York has necessitated a prohibition on the export of gold from the United Kingdom, except by license.

pass at its depreciated value only. After the Napoleonic wars the former method was adopted by England, the latter by Austria-Hungary.

To enact that notes, which have been paid out for a certain value in the unit of account by the Government, or by the Central Bank on behalf of the Government, shall pass at a lower value is very like a breach of faith. The only defence for it is that no one is likely to keep a balance of paper money large in proportion to his total means, and consequently a scaling down of the value of the paper money itself will be less inequitable and cause less loss to individuals than the adoption or continuance of a lower unit of account. The unit of account determines the values of debts, and the total volume of debts is far larger than the total volume of legal tender paper.

If the monetary unit is to be restored without a crying down of the paper money, the natural procedure is to contract credit. In normal times this would be done by raising the rate of interest. But the inflation which grows out of war finance differs from an ordinary credit expansion in that it is caused not by an extension of advances to traders but by excessive Government borrowing. The assets of the banks are swollen, not by commercial bills and loans, but by Government securities of short or long date. An increase in the rate of interest would deter traders from borrowing, but probably their indebtedness is already much below its usual level. What is really wanted is a reduction of the indebtedness of the Government to the banks, or, in the case where the Government has paid its way by itself issuing notes, a redemption of a sufficient proportion of these notes. While the process of inflation is going on, the Government has the advantage of spending money without the trouble of raising it; when the process is reversed, the Government has the trouble of raising the money without the advantage of spending it. Like the Red Queen in "Through the Looking-Glass," it has to run even to stay where it is. It must raise this money either by taxation or by borrowing, and the borrowing must be *genuine*: it must "draw upon the available stock of savings, for if it

financed by the creation of bank credits it defeats its own object.

These form a gloomy array of alternatives. A nation has devoted all its economic resources to the prosecution of a war of life and death, protracted over years. Stocks of merchandise are reduced ; the construction, renewal, and maintenance of fixed capital are in arrear ; everywhere there is a pressing need for production. Is credit to be contracted ? Is the burden of taxation to be increased ? Is the fund of money seeking investment to be waylaid and dissipated into nothing ? The country, it may be contended, is suffering from a scarcity of capital ; is it not madness to encroach on the too meagre supply of credit and money ?

Now the word *capital* is a dangerous one. It is quite true that after an exhausting war the country will be suffering from scarcity of capital, but scarcity of capital means two different things. On the one hand, it means the shortage of stocks of goods, the deterioration of fixed plant, etc., and the arrears of production ; on the other, it means an insufficiency of purchasing power available to be spent on the means of production as distinct from consumption. If it be taken in the former sense the disease and the remedy are alike evident. The productive resources of the community, too long devoted to war, must be applied to overtaking the arrears. Production must exceed consumption, the surplus taking the form of the restoration of the nation's equipment of fixed capital and of its stocks of commodities. But when it is asked how this is to be accomplished, we are at once brought round to the other meaning of the expression, scarcity of capital. The employment of the country's productive resources is governed by effective demand, in the form of purchasing power, and the accumulation of the desired surplus of production over consumption can only be accomplished in so far as the holders of purchasing power choose so to apply it. Now the purchasing power applicable to accumulation, as distinguished from consumption, comes from two sources, from savings and from bankers' loans. There need not necessarily be an absolute scarcity of savings after a war. While the war goes on, savings are drawn into

war loans, and other capital requirements are left out in the cold. Once it is over, the annual supply of savings becomes available again. The "scarcity," arises from the fact that *more* than the normal supply of savings is needed to overtake the arrears of construction and maintenance of fixed capital. And in all probability the amount of savings will be above the normal, since people will put back money out of profits into their own businesses in order to restore the efficiency of their capital, and where this is not enough the urgent need of capital renewals or extensions will present profitable opportunities to the outside investor.

But besides the arrears of expenditure on fixed capital, there is also the shortage of "circulating capital," or stocks of commodities, to be remedied. Broadly it may be said that, while fixed capital is bought with savings, circulating capital is financed with temporary loans. But this is only very roughly true. A trader does not carry the whole of his stock in trade with borrowed money. A portion is supplied from his permanent capital, representing his own savings, or those of other people definitely invested with him. When profits are high, he may supplement his permanent capital by accumulating a reserve, and so diminish his short-term indebtedness. When he incurs a loss on his business, he may borrow to meet it, and may so encroach on his reserve or even on his capital. Moreover not only are stocks of merchandise largely held with permanent capital, but investments are frequently held with borrowed money, which is thus indirectly used to finance fixed capital. Thus the line of demarcation between investment and temporary borrowing never corresponds exactly with that between fixed and circulating capital, and the one limit is subject to variations having little or no relation to the other. Consequently the supply of savings and the supply of bank accommodation must for some purposes be regarded as constituting a single market. If the supply of savings is insufficient to make such rapid progress with the reconstitution of the country's capital equipment as traders desire, then the traders will tend to supplement savings with temporary borrowings. At the same time the merchants, whose stocks are

low, will want to borrow to replenish them, so that the brunt of the demand for funds for both fixed and circulating capital will fall on the bankers.

These conditions will make for active trade and high prices. They will make for active trade because owing to the shortage of both fixed capital and merchandise lavish orders will be given to the producers, even apart from any great demand from the consumers. Prices will be high because the depleted stocks of goods will be exposed to a large effective demand, the quantity of purchasing power in the hands of the public having been swollen under war conditions, and the consumers' income being maintained at a high level corresponding to the activity of production.

In some degree the banks can keep the activity of business within bounds by restricting the accommodation that they grant. But if under the strain of war finance loans and discounts to traders have already been reduced to a very low level, the traders have to a great extent emancipated themselves from the banks. Selling such goods as they have in hand easily at high prices, they are constantly supplied with ready money (bank credits) with which to finance the new orders which they give to the producers.

Now active trade, with its accompaniment of great production and good employment,¹ is in many ways a most desirable condition, but in the special circumstances we are considering it has certain drawbacks. If expenditure is directed too much to consumption and too little to investment, the process of economic recovery is retarded, and the scarcity of commodities is intensified and prolonged. The continuance of high prices means the continued depreciation of the monetary unit. And here we see the justification for the Government raising money to pay off its temporary indebtedness. Whatever money it takes from the consumer, especially if it be taken by way of taxation, will diminish the consumers' outlay. The intense demand which absorbs the already meagre stocks of commodities is thereby checked. The re-

¹ Under the conditions described there may even be a shortage of labour despite the millions of workmen set free by demobilisation.

payment of Government indebtedness diminishes the assets and therefore also the liabilities of the banks, and enables the banks to grant credits to traders to an equal amount without increasing the amount of inflation. Alternatively, it enables the banks to *diminish* the amount of inflation without curtailing their accommodation to traders. In fact, so far as it goes it restores to the banks the command of the situation, and they can use their power *either* to provide funds for capital purposes *or* to reduce the inflation of credit, or partly in one way and partly in the other.

If the Government raises funds to pay off its indebtedness by taxation, the effect will be greater than if it raises them by loans. Taxation, by reducing people's resources, gives them an inducement to reduce their consumption of commodities. Having less money in hand, they may not be able to save so much, but their motives for saving at any rate remain undiminished. If, on the other hand, the money is raised by loan, the stock of savings in the investment market is drawn upon; the motive for saving is to that extent satisfied, and the savings available for other investments are to that extent cut short. A mere funding operation, the transformation of short-term into long-term indebtedness may help to reduce inflation, but will do nothing to finance the restoration of capital. Indeed, in so far as it is applied to reduce inflation, purchasing power destined by its possessors to be spent on capital is deflected to the reduction of credits, and the expenditure on capital is actually retarded. It is only by financial methods, such as drastic taxation, which tend to curtail the expenditure of the individual upon consumable commodities, that deflation and capital expenditure can both be encouraged. The stimulus to capital expenditure is equally given whether the Government debt paid off is held by the banks or by the public. Deflation, on the other hand, requires that the indebtedness of the Government to the banks should be reduced. But even if it is in the first instance holdings outside the banks that are paid off, the additional resources of the investment market are likely soon to affect the assets of the banks. The loans to stockbrokers may be

reduced, or the banks may sell some of their securities, or the same effect may be produced in other ways.

Once the banks' holdings of Government securities are reduced, the creation of bank credits must be kept in check by a high rate of interest or other restrictive influence. Otherwise the gap in the banks' assets will be filled by an increase of loans and discounts, and the inflation will continue unabated.

Deflation and capital restoration, notwithstanding that taxation and other severe financial methods favour both, must be regarded as in some degree rivals. Purchasing power which is applied to the one is diverted from the other. The problems of the finance of recuperation are largely the consequence of this rivalry. As we have already seen more than once, these problems cannot be dealt with in isolation without regard to conditions in other countries. Deflation in particular is largely (though not entirely) a matter of the maintenance of the foreign exchanges.

Every country will seek to keep pace with its neighbours. If one does not deflate its currency as quickly as the others the exchanges will turn against it. It must be remembered that the *direct* cause of an adverse exchange is too much buying. (It would be equally true to say "too little selling," but where inflation is the cause the excess of buying is the important aspect of the matter.) For this purpose the buying in question is mainly that of the dealers. But the buying of the dealers tends to follow the buying of the consumers; it rises and falls with the consumers' outlay, *except* in so far as the commodities in stock are allowed to vary. If for the sake of simplicity all reference to international borrowings and capital transactions be omitted, the maintenance of the exchanges reduces itself to the regulation of the consumers' outlay, subject to such modification as is occasioned by variations in stocks. Taxation directly diminishes the consumers' outlay. A contraction of credit discourages the accumulation or retention of stocks. The country whose currency is depreciated must either apply these remedies more drastically than the others or must acquiesce for the time being in the continuance of the depreciation.

Too rapid a restoration of the currency may provoke a crisis. But it is a necessary condition of "a crisis of any gravity that a serious proportion of the country's trade should be financed with temporary borrowing. Otherwise the shrinkage of the money value of the traders' stocks of goods, though it would make them apparently poorer, would not threaten them with bankruptcy. It may happen, therefore, that a country is left by a great war proof against crises; it has been as it were inoculated; the Government is the only debtor of any importance, and there are practically no trade debts for the crisis bacillus to feed on. This was the condition of France both after 1814 and after 1871. On each occasion the terrors of invasion had reduced credit operations almost to vanishing point, and France in fact was practically untouched by the severe crisis of 1873. England, on the other hand, was the scene of a disastrous crisis in 1814. Great as were the commercial disturbances in the last years of the Napoleonic era, trade and trade-borrowing were maintained at high pressure. When first the Continent and then the United States were shut against British trade, outlets were sought in South America. The bank restriction permitted credit operations to continue in full swing without regard to European conditions, and with the peace and the readjustment of values came the collapse. It is possible that after the most exhausting war the world has ever known the whole world will be crisis-proof. But as the work of reconstruction progresses, and normal banking business revives, it may be that traders' indebtedness will reach an appreciable amount while the process of deflation is still taking place. In that case crises may break out. Especially is it possible that the indebtedness of the investment market may revive very rapidly. Vast funding operations will be undertaken. To some extent the Government securities in the hands of the banks will be replaced by Government securities in the hands of the investment market, carried nevertheless with temporary bank loans.

When crises occur, the progress towards deflation will be suddenly accelerated. Apart from crises, the rate of progress

is more or less within the control of Governments and banks. But what is the rate of progress to be? This brings us back to the point from which we started. Is gold to remain the standard of value? If it is, then there will be some countries enjoying an effective gold standard side by side with others endeavouring to regain it. World movements in the value of currency will be world movements in the value of gold, and local currency movements will only diverge from the world movements in so far as they are detached from their nominal gold basis. The governing condition will therefore be the world value of gold, and this will depend not so much on the number of countries that have a gold standard in operation as on the actual absorption of gold for currency purposes. A country which is striving to contract credit in order to restore its monetary unit to its nominal gold value will probably absorb but little gold. Indeed though in such circumstances it has usually been the practice to make great efforts to purchase a reserve of gold, even at a heavy sacrifice, yet these efforts really only increase the difficulty of restoring the standard. Now that the possibility of maintaining a gold standard on an exchange basis, without the internal use of any currency except paper, is well understood, it may be expected that a Government which is faced with the problem of restoring the standard will prefer to devote all its surplus financial resources to the repayment of indebtedness or the redemption of redundant paper money. But of course it is wholly uncertain what action all the different Governments that will be in this situation will take. It is quite possible that some at any rate of them will begin strenuously buying up gold while their paper money is still at a heavy discount.

Moreover, as we have already seen, there is a short cut to a restoration of the standard. By a stroke of the pen the old monetary unit of account may be restored, so far as debtors' obligations are concerned, and the depreciated paper money may be made legal tender for something below its face value. The ordeal of contracting issues by restricting credit is thereby completely avoided. But this method is not so safe and easy as it looks. If at the moment at which it is done the entire

legal tender currency in circulation is paper, and if it is made to pass at a value approximately equal to that which it then has in the market, there is no reason why there should be any immediate importation of gold. If a favourable time is chosen, when the world value of gold is falling, the exchanges will become favourable and the stock of currency will have to be supplemented by the importation of gold. But if the world value of gold is rising, no gold will be imported, and the paper money will be depreciated even below its new value. It is such a mishap as this which sometimes leads to the complete discredit of paper money, when a general contempt of the legal tender laws makes it useless, and it no longer has any value except for speculators who buy it at an extravagant discount in the hope that the Government may ultimately pay something for it. As is shown by the experience after the collapse of the assignats, this sudden abandonment of paper money as the medium of payment occasions a prodigious demand for coin, and may cause infinite embarrassment to other nations.

And in one way this cutting of the knot intensifies rather than mitigates the evils of a gradual contraction of the currency. The root cause of those evils is the increase in the burden of debts as compared with the value of commodities. From the point of view of equity it is an advantage that the standard is restored without delay for purposes of account, even if the paper money issued under Government auspices is partially repudiated. But this means that the increase in the debtor's burden is made at a single stroke instead of being spread over a period of years. Therefore the method in question is very dangerous, except when traders' indebtedness has been reduced to a negligible amount. If this condition is not fulfilled, there is almost certain to be a severe crisis. After the collapse of the assignats it was simply impossible to face this sudden increase in debtors' burdens, and legislation was passed to adjust past contracts according to the value of the assignats at the time each contract was made.

The burden of an increase in the purchasing power of the monetary unit, whether it be sudden or gradual, is no

confined to the case of the debtor. Falling prices deter traders from holding stocks of goods; new orders are checked and production and employment fall off. But in the case of an arbitrary readjustment of the unit there is likely to be less depression than in the case of a gradual contraction of credit. In the former alternative, wages, prices, and other money values would almost inevitably be translated forthwith from the old unit into the new. If this is done, the costs of production adapt themselves immediately to the new level of values; producers quote prices correspondingly reduced; merchants, having no reason to expect a *further* fall of values, are ready to buy; they may have suffered losses, but that is past and done with, and their position can only be retrieved by profitable trading. If there is a crisis, accompanied by many failures, there may be disorganisation and a temporary depression of output and employment. But this is quite different from the depression of a prolonged credit contraction, when prices go on falling and the merchant repeatedly finds his profit turned into a loss, when the manufacturer cannot reduce quotations till he has reduced wages, when the workman dare not accept a reduction of wages which, interrupted as they are by periods of unemployment, seem already insufficient.

But there is another short cut to the establishment of a gold standard. A new gold unit may be introduced, representing approximately the existing gold value of the paper unit. This was the method adopted by Austria-Hungary, Russia, and India between 1890 and 1900. It was the accepted remedy for currency troubles in the Middle Ages and later, until the time of Locke. It has the advantage of recognising the *fait accompli*. The monetary unit has depreciated; that may be deplorable, but it is no use trying to ignore it. To stereotype the depreciated value may be an injustice to the creditor, but to restore the old standard would be an injustice at any rate to some debtors. And the debtors suffer more from a rise in the value of the monetary unit than the creditors from a fall. So far as short-term indebtedness goes, the creditors are mainly bankers, whose assets and liabilities

are both expressed in the money of account. The purchasing power of their profits and the real value of their capital and reserves may be diminished if the monetary unit is depreciated. At the worst they suffer some loss. But, on the other hand, when the value of the monetary unit is raised, traders are threatened not merely with loss but with ruin, and incidentally this may do serious injury to their creditors. And in fact on the whole both debtors and creditors are inclined to favour inflation and depreciation. The real loss falls on the long-term creditors, the holders of debentures and other fixed interest-yielding securities. A great part of these securities will have been created before the depreciation occurred. To perpetuate the depreciation is to revise the contract in favour of the debtor. The temporary loss of real income, due to the depreciation which lasts during the financial strain of a war, is a minor evil which the investor can put up with. A permanent reduction of the purchasing power of his income is a much more serious matter. So long as society depends on voluntary investment for its supply of capital, an attack upon the purchasing power of interest is dangerous. It must be remembered that what the debenture-holder loses is gained not by labour but by the *shareholder*, whose dividends are swollen by the residual profits. A revision of the standard of value introduces a capricious element into the investment of capital, and especially threatens the class of non-speculative investors who play so considerable a part as the sleeping partners of the modern capitalist system. How far this is contrary to the material interests of society is a subject on which much might be said; that it is an injustice so long as the capitalist system continues seems unquestionable.

But there is one class of investor which is in an altogether special position, more particularly in post-war finance. That is the holder of the national debt.

There is no need to enlarge upon the invidious position of a State which has to decree in what unit of value its own debts are to be calculated. Of course debts may be made expressly payable in gold or in a foreign currency. In that

case the difficulty does not arise. It did not arise in the United States after the Civil War, or at any rate after it was agreed once and for all that the Civil War debt was a gold debt. But what is to be done in a case where the national debt is payable in the national currency, and the basis of the national currency is to be altered? It may be said that, whatever is done in the case of private debts, the national debt ought to be made payable in whatever metallic standard was in operation when it was incurred. If the gold unit of currency is reduced, the interest and principal of the debt must be paid in the old unit. But this is to give the stockholders more than they bargained for. When they invested, it was with no idea of claiming a preference over other investors, and to give them an uncovenanted benefit is an injustice to these latter, who have to pay taxes towards meeting the cost of it. If the national debt holders possess this right, it ought to have been made clear at the time when they subscribed to the loans; for then the State could have had the advantage of getting favourable terms for what would have been a gold loan. It would be dishonourable to alter the standard for the purpose of lightening the burden of the national debt. But if the standard is to be altered on general economic grounds, is it not irrational to give the national creditor a privileged position merely in order to save the appearance of arbitrariness? And if, as is very probable, the greater part of the debt has been incurred during the war, when inflation was in progress, is it not a departure from all reason and justice to select the national creditors of all others to be repaid in the old standard? The pre-war debenture-holder in a trading concern, who lent money of the old standard, is to receive interest and principal in money of the new. His neighbour, who lent the Government depreciated paper, is to be singled out to receive payment in the old standard.

The principle of repaying debt in currency of equal value to that in which it was originally incurred was adopted in the American War of Independence and by Austria-Hungary in 1811. (See above, p. 306, and p. 322.) It was not applicable in England after 1815, if only because debts of different dates

had been consolidated, and the holdings were not distinguishable from one another.

But, after all, the most powerful argument to be urged in support of the inclusion of the national debt within the operation of a new, and depreciated monetary standard is that otherwise the strain may be greater than the country can bear. If the Government finances can only be carried on by means of fresh inflation, the attempt to restore the metallic standard, even by a cutting of the knot, will fail, and in the end the public creditor will only be paid in paper.

And yet this is itself the strongest argument for restoring the old standard *if it can be done*. If the real reason for abandoning the standard, under whatever plausible pretext, is believed to be necessity, the national credit will suffer. The nation can only escape condemnation for a breach of faith at the price of a confession of financial impotence.

We see then that after the orgy of inflation, which seems to be almost a necessary accompaniment of modern war conducted on the grand scale, various currency policies are possible, and even when the policy of any particular country is selected its absorption of gold may vary within wide limits. Gold may enter into actual circulation immediately, either because the issue of paper money has never been sufficient to depreciate the standard at all, or because the paper is made to pass at its depreciated value or because a new gold standard has been adopted. In such cases if the currency requirements grow, and no new uncovered paper money is issued to meet them, gold will be brought to be coined or to support an increased note issue. And whatever the standard may be—if it be an old standard regained, or to be regained, or never lost, or if it be a new standard established or hoped for—a gold reserve, large or small, may be aimed at, or the gold exchange system can be adapted to dispense with a reserve altogether. Thus the absorption of gold is everywhere capable of almost unlimited variation. And the world value of gold depends on the absorption of gold. If there is a general tendency to accumulate gold reserves and to restrict issues with a view to increasing the circulation of gold coin, the value of gold in

commodities will rise. If the tendency is to be content with a paper circulation, without gold backing, the value of gold may fall even below the low level characteristic of war conditions. Which tendency will predominate it is impossible to foresee. On the one hand, the experience of war conditions has increased rather than diminished the importance attached by Governments to the possession of an ample stock of gold. On the other hand, it must be remembered that a stock of gold, whether in circulation or in reserve, can only be accumulated by a sacrifice of other forms of wealth, a sacrifice which nations exhausted with war are ill situated to make. The more they bid against one another for gold, the greater the sacrifice involved. Moreover the greater the value of gold in commodities, the more difficult will it be to establish or to maintain a given gold standard. Thus a scramble for gold, if it occurs at all, will probably check itself before it has gone far.

Seeing that the interests of every country in regard to the gold standard depend upon the action of all the rest, and their action may vary quite capriciously within such wide limits, some sort of international co-operation seems to be required. But international co-operation at once raises the delicate question of national obligations. If all the co-operating states are burdened with heavy war debts, it will be to the interest of all to keep down the value of gold by restricting the demand for it. Are they going to combine, openly or under a pretext, to depreciate the medium in which their debts are payable? This is not quite the same thing as to inflate a paper currency for the purpose of lightening the burden of the national debt, for gold in any case has an intrinsic value as a raw material of industry. But the limits of its variation are incalculably wide, and a general understanding to economise the use of it as currency would have a prodigious effect. But if States generally agree to moderate their efforts in this direction, the picture of the plenipotentiaries deliberating how great an artificial demand for gold must be set on foot in order that the burden of their debts may be made sufficiently heavy and honour may be satisfied, is not altogether convincing. And the problem is still further complicated by the interest of

creditor nations in enhancing the value of the medium in which the debtor nations have to make payment. Everywhere the State is saddled with the responsibility for determining the unit of value, a responsibility which it cannot disavow. Yet as soon as it begins knowingly and of set purpose to exercise that responsibility it is faced with these perplexing problems. The upshot seems to be that the gold market, if every country is left to its own devices, must be irremediably erratic, or, alternatively, if all agree to regulate it, must become too palpably artificial.

The question is not merely that of justice between debtor and creditor. The prolonged depression after 1873, insufficiently relieved by the short trade revivals of 1880 and 1890, showed how much distress can be caused by an appreciation of the common monetary unit of the civilised world. This depression was not entirely the consequence of the war inflations of the preceding twenty years, but was still more traceable to the general transition from a silver or bimetallic to a gold standard. The terrible depression which followed 1815 was directly traceable to the deflation after the war. The gleam of good trade in 1818 and the speculative blaze of 1825 were an inadequate set-off to the general gloom. There is a danger that the present war may be followed by a similar period of excessive currency contraction. Financial correctness, if pressed to the point of pedantry, may lead to a vice of deflationism as bad in its way as inflationism. Indeed one of the evils of inflationism is that when the monetary standard has lost stability, confidence can only be restored at the cost of a drastic currency contraction with all its attendant tribulation. Inflation means inflation of the consumers' income, and more especially of profits and wages, the two principal *variable* constituents of the consumers' income. Deflation therefore means a reduction of profits and wages. If wages resist the process and it falls unduly on profits, the result is unemployment. When the country is tied to the gold standard, and an abandonment of that standard means loss of touch with the world's currency, there is a plain motive to induce the commercial community to undergo the ordeal. "But when the gold

standard has once been relinquished, it becomes very difficult to resist the traders' desire to have just so much credit created as is necessary to finance their business at the existing level of wages and prices. Trade unions do not usually accept a reduction of wages unless a fall of prices or loss of profit has actually materialised. If labour and capital are banded together to resist deflation, their opposition may bring it to nothing, as happened in the United States in 1868. The consumers' income may become stereotyped at its inflated amount. But a country cannot acquire increased purchasing power in the world's markets merely by increasing the number of units in which the consumers' income is reckoned. The inflation will be reflected in the value of foreign monetary units, that is to say in the foreign exchanges. Incidentally this shows the futility of attempting to gain a larger share of wealth for the working classes by raising money wages without taking any other measures to effect a redistribution. Either the high wages will encroach on profits and diminish employment, or they will be accompanied by proportionately high profits and prices. The former condition can hardly be a permanency; the latter can, provided the monetary unit be allowed to be permanently depreciated.

During the war, wages have everywhere been increased in a very high proportion. It seems not unlikely that the difficulty of reducing them again will be the determining factor in the settlement of the future monetary units. Except where depreciation has gone palpably too far, as in Eastern and Central Europe, there is a tendency to revert to the pre-war gold parities. But this does not mean a restoration of the pre-war purchasing power of the several monetary units. Any country which finds its currency appreciated above those of its neighbours will think itself free to indulge in further inflation till the appreciation is reduced. Any country which finds its currency depreciated will wait events, till this further inflation has done its work. By the time they are all in step, the greater part of the world will again have a gold standard, but of course the purchasing power of gold will still be very low, perhaps even lower than ever.

There never was a time at which the currency systems of the world were so exposed to danger as they are likely to be in the immediate future. The portentous profusion of paper money affords unparalleled opportunities for deflation, while the development of credit and the elaboration of such devices as the exchange standard have opened the way to an almost indefinite further inflation, cloaked under the disguise of an economy of gold. Between these two contrary dangers there seems to be no clear principle to keep mankind in the middle way, and it is even possible that one may succeed by way of reaction to the other.

CHAPTER XXI.

CONCLUSION.

WHAT I have called the classical theory of currency starts with the postulate that any two things exchanged must both have *value*. If goods or services are sold for money, the money must have value, as well as the goods or services. If they are sold for credit, the credit must have value. A debt or credit is the debtor's obligation to pay, and, if the debt or credit is to have value, that which he is obliged to pay must have value. Credits can be used as a substitute for money, because and only because they give a title to money. The right to receive money on demand is for many purposes equivalent to money. A piece of paper which purports to confer this right, but does not in fact do so, has in reality no value; it is a promise to pay, which is not kept. Paper money which is not convertible into coin is a sham, a fraud. He who sells goods for paper money sells something for nothing; likewise he who sells them, for a credit payable only in paper money. Coin only differs from bullion in that its weight and fineness are certified. If it does not contain the prescribed amount of fine metal, the certificate is an imposture.

This severe and uncompromising doctrine has owed its success rather to its practical utility than to its theoretical perfection. It has grown up out of the political contests which have raged from time to time about currency questions. Attacked and defended by a thousand politicians and pamphleteers, it has held the field as the one theory which provides an intelligible, self-consistent, workable system. The economists, at any rate for the past half century, have not paid such unreserved homage to it as the practical men. They have seen that the precious metals themselves cannot

provide an invariable standard of value, and they have speculated on ideal currency systems based on index numbers of prices and similar devices. But on the whole for most people sound currency still means, as it has long meant, a metallic currency. It is the only bulwark against inflationism, that insidious financial vice, which seems so attractive, but over-indulgence in which may enfeeble or wreck the system.

But to recommend a dogma on account not of its inherent validity but of its good practical consequences is a dangerous method. When people discover its theoretical weaknesses they may not only reject the dogma but neglect the practical consequences. It is best to know the weaknesses of a friend, otherwise our friendship is precarious, and may be surprised and broken by a belated discovery.

Inflation means a too free creation of credit. The classical theory of currency teaches us to guard against this by tying down credit rigidly to a metallic basis. It rightly holds paper money and debased or over-valued metallic money to be dangerous expedients. But in treating them not merely as dangerous but as the negation of truth it goes too far.

One consequence is that the true nature of a money of account has been obscured. If a credit has no other meaning than an obligation to pay so much gold, there is no room for the conception of a unit for the measurement of debts as distinguished from a unit for the measurement of gold. So long as debts are in fact payable in gold the neglect of the distinction is innocuous. But it is just when the monetary system becomes deranged, and debts are no longer payable in gold, that currency theories, which may usually be left to the care of economists, gain practical and political importance.

In the House of Commons debates of 1811 on the Report of the Bullion Committee the supporters of the Committee mercilessly ridiculed their opponents for suggesting that the monetary unit could be anything except gold or silver. Canning, in what was perhaps the most brilliant speech of the whole long debate (8th May, 1811), taunted Castlereagh with defining the standard to be "a sense of value in reference to commodities". The Bullion Committee had been accused of

putting forward abstract theories. "The admonition to beware of abstract theories," said Canning, "comes from whom? From the inventors and champions of 'abstract currency'—from those who, after exhausting every attempt to find an earthly substitute for the legal and ancient standard of our money, have divested the pound sterling of all the properties of matter, and pursued it under the name of 'ideal unit' into the regions of non-entity and nonsense. I contend," he said, "that a certain specified weight of gold or silver, of a certain fineness, is the only definition of a pound sterling which an Englishman, desirous of conforming to the laws of his country, is bound to regard or understand."

The debaters on the other side had really no intelligible theory to put in opposition to this.¹ They were only concerned to explain away the fact that gold bullion was worth some 25 per cent. more than the coinage price. To press the arguments they used to their logical conclusion would only have been to make them look less plausible and more dangerous. Thus the argumentative battle went by default in favour of the classical theory, and in 1819 when the country was relieved from the overpowering necessities of war finance, the fruits of victory were quietly reaped by the stalwarts of the Bullion Committee. Inflationism found a last refuge in the eccentric radicalism of Birmingham, and it was only against the unimportant opposition of such men as Muntz and Attwood that Peel was speaking when, on introducing the Bank Charter Bill of 1844, he put the question: "What is the real nature and character of the measure of value in this country?"

"What is the significance," he said, "of that word, a 'Pound,' with which we are all familiar? What is the engagement to pay a 'Pound'? Unless we are agreed as to the answer to these questions, it is in vain we attempt to legislate on the subject. If a 'Pound' is a mere visionary abstraction, a

¹ This is not true without exception of the pamphleteers. Mr. Thomas Smith, an accountant, who gave evidence before the Committee of 1819 and wrote two pamphlets, quite appreciated the conception of a Money of Account, though in other respects he contributed his full share to the general output of nonsense which characterised this in common with most other currency controversies.

something which does not exist either in law or in practice; in that case one class of measures relating to paper currency may be adopted; but if the word 'Pound,' the common denomination of value, signifies something more than a mere fiction—if a 'Pound' means a quantity of the precious metals of certain weight and certain fineness—if that be the definition of a 'Pound,' in that case another class of measures relating to paper currency will be requisite. Now the whole foundation of the proposal I am about to make rests upon the assumption that according to practice, according to law, according to the ancient monetary policy of this country, that which is implied by the word, 'Pound,' is a certain definite quantity of gold, with a mark upon it to determine its weight and fineness, and that the engagement to pay a Pound means nothing else than the promise to pay to the holder, when he demands it, that definite quantity of gold."

The general acceptance in this country then and afterwards of this doctrine has contributed greatly to our freedom from currency troubles, and to our pre-eminent international credit position. But undoubtedly Peel, and the supporters of the classical theory missed a part of the truth. They missed the conception of a money of account as something distinct from the legal tender money. To arrive at that conception, it is necessary to understand that an undischarged debt due from a solvent debtor is, from the standpoint of the creditor, purchasing power. There being a demand for purchasing power *as such*, purchasing power commands a price like any other right over wealth. The money of account provides the unit in which debts are legally expressed, and the same unit, being used to express prices, provides a common denominator for the measurement of the relative values of purchasing power on the one hand and commodities or services on the other. So long as the quantity of purchasing power (which we have called the unspent margin) is not unduly increased or decreased, prices are not disturbed and the value of the monetary unit of account remains steady. But owing to the natural instability of credit this cannot be relied on. Therefore the expedient has been adopted of *fixing the price of one commodity.*

Gold is given its coinage price, and to make this price a reality, it is decreed that every debtor may be required, if his creditor so desires, to pay in gold at that price. The result is that the dealers in debts have to keep a part of their assets in gold, in order to be in a position to comply with their legal obligations. But this plan of making debts payable in gold is merely a device for keeping the variations in the value of the monetary unit within bounds. The value of one commodity in terms of another is regulated by the conditions of supply and demand, and so long as those conditions do not vary greatly one commodity is as good a standard of value as another. In practice conditions of both supply and demand are apt to vary a good deal, and the precious metals being less subject to wide and rapid fluctuations than almost any other commodities as well as being well adapted for coinage, have been generally selected as the basis of the monetary system. But convenience alone has been the ground of this choice. To say that the monetary unit of account has no *meaning* but the precise weight of gold or silver which it represents at the coinage price is flagrantly untrue. When Castlereagh defined the pound sterling to be "a sense of value in reference to commodities" he can have had no very clear idea of the nature of a money of account or of its relation to credit. But to reply, as Canning did, that "a certain specified weight of gold or silver of a certain fineness" is the only definition that an Englishman need regard or understand, is completely to misconceive the true theory of the subject. At that very moment debts and prices were actually reckoned in a pound sterling which Canning and his friends clearly proved to be depreciated 20 per cent. They may have reasoned quite rightly that £1 *ought* to have meant $113\frac{1}{3}$ grains of pure gold. In point of fact it *did* mean, in terms of gold, about 91 grains. This was only possible because the law which defined £1 in terms of gold or silver was in abeyance. It remained merely the unit for the calculation of debts. Its value, no longer bound to any specified commodity, was determined by the exceedingly complex process analysed in Chapter III. Peel, too, when he declared that a pound meant a certain definite quantity of gold with a mark

upon it to determine its weight and fineness, claimed that this was so "according to practice, according to law, according to the ancient monetary policy of this country". The argument was not that no other monetary system was possible, but that, as this monetary system actually existed, an engagement to pay a pound must be interpreted in the light of it, and to discharge it otherwise than by the payment of the stipulated quantity of gold would be a breach of faith. This is the real foundation of the classical theory. To secure a sound currency against all attacks, it is not enough merely to prove that it is invariably expedient to maintain a metallic standard; a departure from that standard must be shown to be actually dishonest; the system must be securely founded on a categorical imperative.

But this categorical imperative did not necessarily preclude any change of standard whatever. Just as loyalty to the *de facto* monarch, even though a usurper, was recognised as innocent by the law of treason, so with lapse of time a monetary standard, in its origin an immoral debasement, might become entitled to recognition. Queen Elizabeth, whose boast, *moneta in justum valorem redacta*, Peel held up to approbation in the debates of 1819, did not go back to the standard that existed in 1543, but coined a Troy pound into 6s. instead of 45s. And the coinage price of silver, 62s. to the pound, which survived till 1816, was the result of a further debasement by Elizabeth herself, which, though slight, did not differ in principle from the mediaeval debasements. The classical theory of currency could not but condemn any debasement, but a change of standard from silver to gold or *vice versa* might be perfectly legitimate. There was nothing contrary to the categorical imperative in the change from a silver to a gold standard in Germany in 1873. A promise to pay 930 thalers meant before the change 15½ kilogrammes of silver, and after the change a kilogramme of gold. But there was no breach of faith, because a kilogramme of gold was equal in value to 15½ kilogrammes of silver. If Mr. Bryan and the silver party had won the presidential election in the United States in 1896, a debt of \$100 would have become payable

We have already had some experience of the effects of the displacement of stocks of the precious metals from use as currency. When bimetallism broke down, silver lost the privilege, which it had shared with gold, of buying credit everywhere at or near a fixed price. The gold price of silver fell, as the change worked itself out, from 6d. to 22d. This fall was doubtless due in part, but only in part, to a rise in the value of gold and to an increase in the annual supply of silver, and it was prolonged over thirty years. But the displacement of gold by paper during the war has been more rapid and more sensational.

So long as gold remains the standard of value, any change which would greatly diminish the quantity used as currency and currency reserves should be adopted only with the greatest caution. A great extension of the gold exchange standard is sometimes recommended with the avowed object of economising or even of entirely eliminating the use of gold. Internal circulation can be adequately provided for with paper, which can then be maintained at par with foreign currencies by convertibility into foreign credits. Instead of gold reserves every central bank of issue would hold credit balances at foreign centres. In all such schemes it is essential to consider the effect on the world's standard of value, and Professor Irving Fisher, who has made a proposal of this kind,¹ includes as a prominent part of it an international unit of value based on an index number of prices.

These large changes in the world value of the precious metals are abnormal. And though they are sometimes unavoidable, they tend in some degree to correct themselves. A country with a large reserve of gold or silver refrains from selling it in a very unfavourable market. The silver reserves which existed in 1873 were for the most part retained until they were gradually used up in the manufacture of subsidiary currency, and the United States, under pressure from the silver interests, actually continued to accumulate increased silver reserves till 1893.

¹ See his "Purchasing Power of Money".

The periodic credit expansions and credit contractions, on the other hand, and the changes in the value of gold which accompany them, must be regarded as normal. They are due to the ineffectiveness of a metallic standard as an *automatic* regulator of the currency unit. A change in the quantity of money in circulation is an *effect* not a *cause* of a change in the quantity of credit created.

The increase or decrease of cash reserves gives the banks the signal to accelerate or to retard the creation of credit, but is in itself no more than a symptom. The actual variations in the value of the monetary unit are the result of the regulation of credit, which rests in the discretion of the bankers. The use of gold as an international currency tends to prevent credit conditions in any one country from deviating from those in the others in more than a certain limited degree, but, though it partially unifies the currencies of the world, it does not prevent them from appreciating and depreciating in unison. The world value of gold is tied to the monetary units of the world. When they rise, it rises; when they fall, it falls. Thus, the use of gold as currency, whether as coin or as bank reserves, makes it *less* satisfactory as a standard of value. When credit starts expanding, other commodities respond by rising in price. But gold cannot. If credit runs away, it carries gold with it. Apart from the almost negligible effect of trade prosperity in increasing the use of gold in industry, the gold market does not respond to the influence which has raised the prices of other commodities except by the absorption of gold for currency purposes. This absorption only takes effect gradually, and gives a very tardy warning of the need to contract credit. If gold were not used as currency, nor even as the means of settling international balances, any expansion of credit would quickly raise its market price, and if the regulation of credit were always so directed as to keep the price of gold as nearly as possible constant, action would be taken at an early stage. And since silver has ceased to be the standard currency of any of the great credit-using countries, it has regularly risen and fallen in price like other commodities in correspondence with the expansions and contractions of credit, though upon these

periodic fluctuations there was for many years superimposed a general tendency to depreciate.

Criticism of any theory of currency leads up to the question, What is the real aim of a currency system? What qualities should we look for in our standard of value? In some sense the answer must be that we look for fixity of value. But fixity of value is a conception which itself calls for explanation. Value is not a quality, but a relation, and fixity of value must be fixity of value in terms of some other thing or things. No one commodity can supply a satisfactory measure, and the economist has recourse to an index number for a test. The index number ought to be based on *all* commodities, weighted in proportion to their consumption, and it ought even to embrace services, but only *consumable* commodities or services, for otherwise raw materials and intermediate services would be counted twice over. So composed the index number is simply a sample taken out of the consumers' outlay. And prices so measured will tend to rise or fall with the consumers' outlay. But not in exact proportion, for, when credit is expanding and the consumers' outlay swollen, consumption is partly fed from stocks.

But then what allowance is to be made for a general scarcity or a general abundance of commodities? If the consumers' outlay be constant, the index number will be raised by scarcity and depressed by abundance. If the index number be constant, the consumers' outlay will be raised by abundance and depressed by scarcity.

The better alternative seems to be to aim at making the consumers' outlay constant. But, of course, it must not be absolutely constant; it must vary with the population, and must also vary in some way with the quality of the work they do. If that ideal could be attained, the value of the monetary unit in terms of *human effort* would be kept fixed.

But this is not the only possible solution. The monetary unit is employed for the measurement of debts. The purpose of fixing its value is to preserve justice as between debtor and creditor. We are not here concerned with the fundamental economic conception of justice, justice is the distribution of

wealth, but with the strictly limited conception of securing the fulfilment of legitimate expectations. So long as we base the economic management of society on bargains which relate to the future, the stability of the unit in which those bargains are calculated must be of paramount importance. What the lender of money consents to defer is his consumption of commodities, and it would seem to follow logically that what he should receive back is the same command over consumable commodities as he surrendered. If the same quantity of commodities represents either a greater or a smaller amount of human effort, that is the concern of the borrower.

Either view seems to be perfectly tenable, and neither seems necessarily to represent the last word of justice. Justice in this sense means no more than a code of rules dictated by expediency, and rival solutions are to be tested solely by their practical consequences.

When it comes to practical consequences, all that debtor and creditor ask is that they may know how they stand, that they may be secured against arbitrary or incalculable variations in the value of the monetary unit. If it approximates to a fixed amount of human effort, or to a fixed amount of wealth, or to something intermediate between the two, this is in all probability sufficiently accomplished.

The danger is that the unit may wander far beyond these limits. Beset by the tendency of credit towards inflation, it is always liable to fall away from whatever standard may be adopted. Unless a return to the standard is regarded as an unequivocal obligation, there is no limit to the possible depreciation. The unit may follow in the well-trodden path of the assignats, the continental currency, the Austrian paper florin, the rouble. A return to a standard once lost is a painful and laborious journey. And if a fixed standard is to be preserved, this painful and laborious journey must be travelled, after every indulgence in inflation. As Cobden once said of the greenbacks, after the debauch comes the headache.

It is the inherent instability of credit that is perpetually involving the world in credit expansions, each of which would threaten the collapse of the gold standard if it were not

succeeded by a contraction in time. The alternation of expansions and contractions would be comparatively harmless but for the dislocation and distress which accompany the contraction. Nor is there any sufficient compensation for this in the prosperity which marks an expansion. This prosperity is largely a matter of high profits. Employment is good, and, output being correspondingly great, there is no doubt more wealth to go round. But notoriously, wages do not rise as quickly as prices, and on balance the great mass of the people may be little if at all benefited. The working classes have the greatest interest in a stable currency, and so long as the monetary unit does not break away from all bounds, like the assignats, the question of justice between debtor and creditor is less important than the effect of currency movements on employment and real wages.

We have traced the instability of credit to its source in our earlier chapters. We found that the initiative in production rests with the merchant and the promoter, the dealer in commodities, and the dealer in capital issues. It is they who give the order to produce. The process of production which follows, gives rise to a chain of *debts*. The manufacturer or contractor becomes indebted day by day to his employees. The merchant becomes indebted to the manufacturer. But whereas the merchant's indebtedness is due at some future date, when the goods are to be delivered, the manufacturer's obligations are immediate; his employees want to use these obligations as purchasing power. Here intervene the banker, who takes the immediate obligations upon his own shoulders, in exchange for a future obligation which the manufacturer, as the creditor of the merchant, is in a position to give him. The banker's debts, unlike those of the manufacturer, can be conveniently used as the means of payment; or, where legal tender money is needed for the purpose, the banker makes it his business to supply money on demand.

Thus by giving the order to produce, the merchant indirectly creates in this new accession of purchasing power an effective demand for things equal in value to those produced. Production feeds demand, and demand stimulates production,

The only limit to the process is set by the slow absorption of legal tender money into circulation. When the supply of legal tender money runs short, the brake is put on with a jolt. The banker tries to stop the merchant borrowing. The merchant curtails his orders. Production flags, and checks demand; demand flags and checks production. Depression reigns, till at last a sufficient supply of legal tender money is wrung out of circulation to enable the banks to start on the career of expanding credit again.

It is one of the advantages of the standpoint which we have adopted, treating credit as the primary means of payment and money as subsidiary, that it brings out the causes and the nature of these cyclical movements with special clearness. And I think it enables us to trace the instability of credit, not so much to the banker as to the merchant and the promoter. The banker may not be free from responsibility; it may be that he ought to take earlier steps to contract or expand credit as the case may be, and that he ought not to pay a mechanical allegiance to the proportion of his cash reserves to his demand liabilities. An all-wise banker might do much to remedy the evil; but it is doubtful if he could do more than shorten the period and the extent of the cyclical changes, without avoiding these altogether, so long as production depends upon the judgment, almost upon the caprice, of the merchant. It is an easy thing for a merchant to give lavish orders when demand seems brisk, or to let his stocks run down when the market conditions are unfavourable. But when he and his legion of colleagues all act on the same reading of the market, the one decision may tax the productive energies of the people for years, the other may cast them into the desolation of idleness.

The merchant has a legitimate and a very important and responsible function; he has to foresee what future demands have to be met, and to direct the productive resources of mankind accordingly. The capital promoter, whether he be himself a manufacturer, or merely an intermediary, exercises the same function over a longer period. Not only must they look forward to the varying demand for commodities of existing

kinds, but they must anticipate the demand for new products, and must see what the consumer will want long before he has himself considered the matter. In making their forecasts they measure demand by money offered. Now anything which affects the consumers' outlay as a whole affects the money demand for *all* commodities. *Pro tanto* it vitiates the dealers' calculations. Each dealer is interested in his own commodity and learns to read the signs of the market. This would be quite difficult enough if the consumers' outlay were stable, and only the *relative* demand for commodities varied. The variation in the consumers' outlay itself introduces a further and most baffling complication. Practical men can hardly be expected to enter into the highly technical theory which underlies this variation. They have to approach it as an empirical problem. And very many never really appreciate it at all. The result is that dealing in goods and in capital issues is a much more *speculative* business than it would otherwise be.

It might be thought that the merchant's activities would be innocuous but for the fatal facilities he receives from the banker. It is his power of borrowing that enables him to increase his stocks as he pleases, and it is the banker's power of restricting credit that impels the merchant to reduce his stocks in spite of a favourable market. This is a question which we could only decide by picturing to ourselves a community without banks. Banking, as we saw in Chapter XII., comprises two distinct functions—temporary lending, and the provision of transferable credits as a means of payment. Their union is a matter of convenience and not of necessity. Were they separated, the supply of purchasing power would lose its elasticity. But it is not at all certain that the consumers' outlay would become less elastic. Even if the stock of purchasing power were absolutely fixed, traders would always endeavour to economise balances either by borrowing or by lending. If they borrowed and lent a little too freely, the consumers' income would be increased, and the consumers' portion of the unspent margin would grow at the expense of the traders' portion. The absence of banks, with their con-

venient power of creating purchasing power, would only make the inevitable contraction of credit operations the more violent. Under such a system the slow passage of money into circulation when trade is active and its slow return when trade reacts would occasion the same periodicity as has been found to exist under a banking system.

Consequently the credit cycle is not traceable to the association of the creation of purchasing power with short-term lending. Nor is it even traceable to the existence of short-term lending itself. Suppose that there were no short-term lending, so that traders could not economise balances in this way. If markets were favourable, they would reduce their idle balances by buying goods. Orders to producers would be thereby increased, production stimulated, and the consumers' income would expand. After an interval the consumers' portion of the unspent margin would encroach, as in the previous hypothesis, upon the traders' portion, traders would be unable to give orders, production would contract again, and so the cycle would set in.

Far from causing the cyclical fluctuations, a banking system diminishes their violence and facilitates their control. Nevertheless, though credit institutions are not themselves the cause of this phenomenon, yet where such institutions exist it is through them that the fluctuations take effect.

It is these credit movements which determine the "rapidity of circulation" of money and of credit. There is no need to dwell on the futility of any theory of currency which accepts the "rapidity of circulation" or the "needs of trade" as something given, something determined from outside independently of the currency system itself. By the "needs of trade" in regard to purchasing power we mean simply the unspent margin. Our analysis in the earlier chapters has shown how the unspent margin is determined. The earlier devotees of the quantity theory found it necessary to qualify that theory to the extent that a change in the quantity of currency would not necessarily produce an exactly proportional change in prices if in the interval the needs of trade had changed. More precisely it came to be laid down that, if the rapidity of

circulation increased, a smaller stock of currency would support a given level of prices, and vice versa. In reality an increased rapidity of circulation is merely one of the symptoms of a credit expansion, and a reduced rapidity one of the symptoms of a credit contraction.

We have treated money as subsidiary to credit. In a highly-developed system of deposit banking, such as that of England or the United States, the justification for this is obvious. Purchasing power is created and extinguished in the form of credit. Even gold fresh from the mines is in the first instance sold to a bank in exchange for a credit; it is only coined and passed into circulation when the customers of the bank ask for it.

In recent years development has everywhere been in the direction of this system. But even where it has gained little or no footing, the alternative is nowadays the use of notes of a central bank of issue, which, though they may be legal tender, are none the less obligations of the bank. As we saw in Chapter III., the line of demarcation between credit and money, though clear enough in principle, becomes indistinct in the case of the legal tender bank-note. Though the legal tender bank-note is itself more properly money than credit, it appears in the balance sheet of the bank of issue along with the deposits, and it is brought into being by the same process. The borrower is given the option of taking the sum lent either in notes or in credit, and if it is the prevalent custom to choose notes, that makes little difference to the principles of control. Control of currency nowadays rests on that association of the creation of purchasing power with short-term lending which forms the foundation of modern banking.

INDEX.

ABSORPTION of gold—
 as currency after the War, 358-9.
 by Germany in 1872-3, 31x.

Acceptance, acceptor, *see* Bills of Exchange.

Accepting houses, 105, 213; at a financial centre, 155.

Accommodation bills, 195.

Account—
 money of, 2, 5, 14, 31, 74, 182, 295, 365-7.
 unit of, *see* Monetary unit.

Advances, bank, 7, 98-9, 194; to Government, 208, 219-22.

Advances by Central Bank—
 in a crisis, 152-3, 158.
 in war-time, 220.

Advances by Bank of England—
 to Government during the Napoleonic Wars, 272, 277-8.
 to Government during the War of 1814-19, 220.
 to Pitt's Government, 256-7, 258-9.

Advances of exchequer bills—
 during crisis of 1793, 256.
 during crisis of 1811, 272.

Agadir crisis, 1911, 219.

Agricultural products—
 credit requirements of dealers in, 123.
 effect of a crisis on, 138 (*see also* Harvest, Famine).

America, *see* United States.

America, Latin—
 paper money current in, 344.
 silver production of, 305.
 speculative trade with, in 1810, 271, 353.

Americans, paper money invented by, 305.

Amiens, Treaty of, 270.

Amsterdam—
 Bank of, 178, 192, 201, 288.
 exchanges on, before and after recoinage of 1696, 292, 298.
 as financial centre, 267, 291 (*see also* Holland).

Antwerp—
 exchanges on, during Tudor debasement, 284, 287.
 as financial centre, 281.

Argentina—
 speculation in, leads up to Baring crisis, 1890, 316-17.
 utilisation of gold exchange standard by, 220.

Assignats, French, 176, 233-54, 261, 355.

Assignats, French—
 called *l'Argent de Paris*, 246.
 effect of, on French coinage, 300-1.
 speculation in, 246, 254.
 total issue of, 252.

Assignment of debts, 4, 99, 100, 186, 376.

Australian gold discoveries, 175, 307.

Austria-Hungary—
 crisis of 1873, 312, 323.
 currency, effect of wars of 1859, 1864, and 1866 on, 322-3.
 development of, after 1867, 311.
 Gold Standard Law, 1892, 325.
 loan to, in 1795, 256, 259.
 paper issue of 1811, 321-2.
 silver, suspension of free coinage of, 323-4.

Specie payments—
 attempted, 1816, 274, 322.
 resumed, 322.

use of gold exchange standard by, 120.

War with France, 1792, 236.

Austrian National Bank, 322.

Austro-Hungarian Bank, advances by, to Dual Governments, 220.

Automatic systems of note issue, 75-81, 96.

BALANCE of—
 exports and imports, 90, 114, 138-41, 225, 279, 310, 312, 313, 316-17.
 indebtedness, 59, 60, 70.
 payments, 86.

Balances—
 average, and rapidity of circulation, 47-8.
 changes in, relation of to change in income, 41.
 consumers', 41.
 discharge of, 53.

Balances—*cont.*—
 economised by temporary borrowing, 37, 40, 187, 207, 291-2, 378, 379.
 effect of war on, 217.
 Government, 207.
 loss of interest on, 37, 40, 110, 187, 217.

Balkan Wars of 1912-13, 215.

Bank—
 advances, *see* Advances.
 assets, 7, 9, 38, 98-9, 132, 187, 192-5;
 local distribution of (*see also* Gold exchange standard), 106, 116-17, 155-6, 160, 229.
 capital, 38, 132, 187, 193.
 credit, different from money, 5.
 failures, 133, 196-7, 200, 202, 223.
 investments, 187, 193-4, 219.
 notes, 4, 30-1, 96.
 distinction of, from paper money, 30.
 not payable on demand, issued in the eighteenth century, 191.
 premium on, in China, 178.
 small, disadvantages of, 19.
 State regulation of, 50, 202-3.
 profits derived from unspent margin, 186, 189-90.
 rate, 51, 128, 198; London, 81, 117, 125, 149-50, 198.
 reserves, 22, 28, 30, 37-8, 48, 50, 158, 168, 187, 197.
 English system of, 81, 197, 220.
 fixed proportion system of, 27, 48, 49, 196, 377.
 inclusion of foreign bills in, 118-19
 (*see also* Gold exchange standard).

Bank, Central, 50, 52, 78, 156, 178, 195, 197.

advances by, 153, 158, 220.
 borrowing by, 51.
 reserve of foreign bills held by, 118-9.

responsibility of, for a credit expansion, 130, 202.

Banker—
 creates purchasing power, 17, 59, 219, 376.
 defined as a dealer in debts, 4, 6, 14, 185-6.
 demand obligations of, 22, 48, 99, 186-7, 191-2.
 functions of, in trade, 4, 197, 376, 378-9.
 obligation of, to supply gold at a fixed price, 17, 167, 200-1, 368.
 relation of, to customers, 9, 18, 23-4, 99, 133, 195-6.
 as underwriter or company promoter, 187, 194.

Banking system of—
 England, 79-81, 197, 220.
 Europe, 81-3, 199, 220.
 United States, 78-9, 85, 189, 198-9, 204-5, 315-16.

Bank—
 of Amsterdam, 178, 192, 201, 288.
 Austrian National, 322.
 Austro-Hungarian, 323.

Bank of England—
 advances by, to Government, 220, 256-7, 258-9, 272, 277-8.
 and Indian reserves, 122.
 as the Bankers' Bank, 81, 197, 220.
 Bank Charter Act of 1844, 78-81, 95-6, 160, 366.
 Banking Department, 78-9.
 Baring crisis, measures during, 317.
 borrowing from, 198, 221.
 Continental credits in favour of, in 1839, 158, 161.
 discount of bills by, at outbreak of War in 1914, 221.
 fixed fiduciary issue of, 78-9.
 foundation of, 291.
 gold reserve of, held partly abroad, 160, 229.

Issue Department, 78-9.
 notes, 13, 31, 73, 78-81, 159-60, 255, 265.
 restriction of cash payments, 1797-1819, 13, 126, 159, 233-4, 255-78, 301, 353, 371.
 suspension of cash payments by, in 1696, 297.

Bank of—
 France, 78, 82, 157, 233 (n.), 273, 274-5.
 Hamburg, 178, 192, 201, 257, 288.
 Prussia, 81.
 Venice, 288.

Banks—
 bills drawn on, 100-1, 103.
 confidence in, 103-4, 196, 260.
 country, in England in eighteenth century, 255, 273, 300.
 Exchange, 58, 98, 105-6, 117.
 of issue, European, 81.
 payment of cash into, 20, 37, 190-1.
 runs on, 192.
 savings, 22, 36, 37, 193-4.
 solvency of, 4, 15, 133, 193-7.
 State, 50.

Baring crisis of 1890, 141, 150, 158, 317.

Baring, Sir Francis, 260.

Barter, 1.

Bills nationaux during French Revol. lution, 234, 245, 254.

Bill-brokers, 197.

Bills of Exchange, 98-106, 152.
acceptance of, 100, 152.
acceptor of, the principal debtor, 105.
acceptor of, difficulties of in a crisis, 152.
discounted by Bank of England at outbreak of War in 1814, 221.
discounting of, 101, 103, 104, 112-3, 152, 155-6, 185.
domestic, 98.
drawer of, 105.
drawn on banks, 100-1, 103; on a financial centre, 112-3, 155; on London, 106, 212.
endorsers of, 100, 105, 152, 192.
foreign, 101.
Indian, 122, 332, 334, 341-2.
origin of, 102.
place of payment of, 101-2, 155-6.
rediscount of, 83, 193, 196, 199, 204.
use of, as currency, 192.

Biometallism, 174, 324, 372; in France, 174-5, 179, 274, 299, 303, 307.

Birmingham and inflationism, 366.

Blockade, Napoleon's Continental, 267, 271, 353.

Borrowing, *see* Loans, Advances.

Borrowing country, crisis in, 145.

Bourse, 91; Paris, during the Revolution, 247-8, 250, 262.

British—
Credit, functions of, in War, 212, 224, 228-9, 291, 295.
Currency notes, 31, 80, 160, 229, 232.
Empire, gold production, 224.

Bryan, W. J., 320, 369-70.

Bullion—
Committee of 1810, 224-5, 276-7, 365.
dealings of the London Goldsmiths in, 289-90.
prices of, during the Bank Restriction, 1797-1819, 269.
price of, in 1795, 263.
Revolutionary laws as to dealings in, 244.

CALIFORNIAN gold discoveries, 175, 307.

Call money, 146, 197-8, 318.

Calonne, 257, 300.

Cambon, 240, 242.

Canning, 365-6, 368.

Capital—
of Banks, 38, 132, 187, 193.
demand for, 9, 94.
double meaning of, 191, 348.
expenditure by Government, 207-8.
expenditure, financing of, 9, 91, 109, 142, 190, 194-5, 349.
fixed, 9, 91-5, 109, 228, 348-9.
.market, *see* Investment, market.

Capital—*cont.*—
of merchants, 835, 188.
scarcity of, 191, 348.

Carrying trade, 61, 70.

Cash, *see also* Money.
distribution of stock of, 21, 37-8.
in hands of the public, cannot be arbitrarily altered, 38, 49, 178.
interchangeability of, with credit through the banks, 38, 48, 168-9, 172.
latent demand for, 23, 28, 89.
payment of, into banks, 20, 37, 190-1.
payments, suspension of, *see* Suspension of payments.
traders' needs for, 20.

Castlereagh, 278, 365, 368.

Central Bank, *see* Bank.

Certificates, gold, 75-6, 97.

Chamberlayne, Sir Thomas, 284-5.

Charles II, 291.

Cheques—
little used on European Continent, 51.
not drawn on time deposits, 192.
used to pay wages in crisis of 1803, 319.

China, 72, 178, 179, 180, 202, 344.

Circulation—
drain of money into, 20, 22, 23, 28, 38, 89, 96, 107, 125-6, 130, 377.
rapidity of, 46-8, 379-80.
return of money from, 38, 62-3, 126, 377.

Classical doctrine of currency, 1, 17, 18, 364, 366, 369.

Clearing House, 56, 106, 152, 196, 204; international, 106, 154-6; of New York, 79.

Clipping of coins, 173, 280, 289-91.

Coinage Act—
1816, 177, 302-4.
1870, 303.
1873 (United States), 314.

Coinage—
debasement, 173, 181, 183, 280-3, 288.
during French Revolution, 244.
free, 17, 171, 173, 179, 181, 200.
free, of gold, suspended in certain countries during the War, 230-1, 345; free, of silver, suspended: in England, 301; in France, 175, 303; in United States, 314; in Austria-Hungary, 323-4; in Russia, 327; in India, 329-30.
imperfections in, 173, 182, 280.
in Middle Ages, 280.
nature and purpose of, 17, 171.
price of gold, 74, 88, 174.
in Austria-Hungary, 325.
in England, 302.
in France, 74, 174.

Coinage—*cont.*—
 reform, attempted in 1552, 284.
 of Elizabeth, in 1560, 287-8, 369.
 of 1666, 296-7.
 of 1774, 300.
 of 1816, 177, 302-4.
 of rupees, 121, 172, 330, 331-3.
 Coins, overvalued, 72, 121, 171-2, 175,
 177, 286-7, 301-3, 308.
 Collateral security, 99, 133, 152-3, 194-
 5, 197.
 Command of the sea, 228, 295.
 Commercial crises, 131-5.
 Committee of Public Safety, 1793-4,
 238, 240, 261.
 Commodities—
 foreign trade, 68, 69, 90, 107, 139,
 223.
 non-transportable, 69.
 prices of, *see* Prices.
 sensitive, 138, 140.
 transportable, 69.
 Commodity, use of, as money, 2, 17,
 167, 367.
 Confidence in Banks, 96, 103-4, 260;
 in currency, 117-8, 149-50, 156,
 159, 283-4, 285, 286-7, 355, 370.
 Consumers' income—
 definition of, 41.
 effect of contraction of credit on, 109.
 effect of failure of harvest on, 62.
 effect of foreign loan on, 64-5.
 effect of war finance on, 222-3, 227.
 relation of, to creation of credit, 9,
 41-4.
 relation of, to Government finance,
 207.
 surplus of, available for investment,
see Savings.
 Consumers' outlay—
 definition of, 41.
 effect of credit contraction on, 108-
 10, 114.
 effect of credit expansion on, 22, 43,
 66, 87, 95, 114.
 effect of war finance on, 222-3, 227.
 and new issues, 95, 142.
 reckoned by each country \div its own
 currency, 59.
 relation of, to consumers' income, 9,
 41-4.
 relation of, to Foreign Exchanges,
 59, 64-5, 66.
 relation of, to Government finance,
 207.
 represents demand for goods, 42.
 sample of, used as index number,
 374-5.
 Continental Congress, issue of paper
 money by, 305.

Continuity of prices, 10; of money of
 account, 10, 176-3.
 Contraction of credit, *see* Credit.
 Convertibility of—
 credit into money, 17, 38, 48, 74,
 168-9, 172, 192-201, 223-4.
 credit into gold, 57, 63, 74, 106, 116-
 17, 167, 182, 260-1.
 gold into credit, 63, 178, 180-1, 371.
 paper money into gold, 32, 72, 73-85,
 119.
 paper money into credit, 172.
 Copernicus, *Gresham's Law* anticipated
 by, 285 (n.).
 Copper tokens, 176.
 Country Banks in England in eighteenth
 century, 255, 273, 300.
 Credit—
 bank, different from money, 5.
 banker a dealer in, 4, 6, 14, 185,
 376.
 British, functions of, in war-time, 212,
 224, 228-9, 291, 295.
 contraction, effect of, on—
 consumers' outlay, 108-10, 114.
 employment, 10, 125.
 foreign exchanges, 75, 88, 110-18,
 130, 352.
 prices, *see* Prices.
 production, 108-9, 111, 114.
 profits, *see* Profits.
 traders' balances, 110.
 wages, *see* Wages.
 contraction—
 after the War inflation, 347, 361-2.
 at a financial centre, 112-14.
 methods of, 23-4, 107-26, 258, 274-5,
 347-8, 350-2.
 remedy for inflation or depreciation
 of the monetary unit, 23,
 74-5, 88, 89, 96, 107-26, 130.
 sensitivity of a credit system to,
 107-26.
 tendency of, to cause financial
 crisis, 130-1, 135, 148, 162,
 353.
 a universal, 89, 97, 130, 136.
 control of (*see also* Interest, rate of),
 48-52, 88, 178, 182.
 creation of, 9, 20, 30, 40, 43, 45, 169-
 70, 191, 376, 380.
 creation of, in war-time, 211, 215,
 218-19, 221-2.
 and debt, different names for same
 thing, 3-4.
 expansion—
 counteracted by a financial crisis,
 251-2.
 drain of money into circulation
 caused by, 11, 39, 96, 130, 377.

Credit—*cont.*—

expansion, effect of, on—
 commodities, 90-1.
 consumers' outlay, 22, 43, 66, 87,
 95, 114.
 employment, 21, 126.
 foreign exchanges, 66, 74-5, 90, 95,
 187.
 investment, 91-5.
 prices, *see* Prices.
 profits, *see* Profits.
 value of gold, 167, 373.
 expansion—
 after the War, 350, 362.
 at outbreak of War, 209, 211.
 responsibility of Central Bank for,
 130, 202.
 tendencies to, 12, 127-9, 362.
 transmission of from country to
 country, 86-97, 130.
 inflation of, *see* Inflation.
 instability of, 13, 14, 30, 86, 89, 96,
 124, 127, 170, 375.
 interchangeability of, with cash
 through banks, 38, 48, 168-9, 172.
 latent demand for, 27, 89, 107.
 a means of payment, 3, 9, 30, 56,
 185.
 and money, delimitation of uses, 18-
 22, 37-8, 48, 189.
 without money, 2-16, 33, 223.
 movements, periodicity of, 125-6, 373,
 376-9; world-wide character of,
 130.
 new, nature of, 7, 22, 40, 169.
 originates in production and is ex-
 tinguished in consumption, 10,
 48, 170.
 "policy and imports of gold, 95-7.
 problem of stabilising, 16, 30, 375-9.
 quality of, 15, 103-4, 106, 117, 133,
 152-3, 156, 158-9, 196-7, 200-1,
 204.
 relation of, to wealth, 186, 227-8.
 relative dependence on, of merchants,
 manufacturers, and farmers, 123.
 of small traders, 99, 197.
 supply of, 38, 169-70.
 world-wide, 104-6, 117, 155.

Crises, financial, 28, 131-62, 184, 189,
 191, 255.
 causes of, 28, 130-6, 351, 355-6.
 effects of on—
 foreign exchanges, 131, 133, 145,
 237, 265-6, 271, 273-5, 310, 312.
 prices, 131, 136, 137, 140, 151.
 securities, 141-7.
 solvency, 131-3, 135-6.
 immunity from, of a country ex-
 hausted by War, 353, 355.

Crises, financial—*cont.*—

measures to be taken in, 151-62.
 at outbreak of War, 210-11.
 policy of Bank Charter Act regard-
 ing, 95-6.
 produced by excessive elasticity of
 currency, 85.
 relation of, to speculation, 145-8.
 responsibilities of Central Bank in,
 152, 156, 195.
 suspension of Bank Charter Act
 during, 79-80, 160.
 transmission of from country to
 country, 137-48.

Crisis of—

1783, 255.
 1793, 126, 237, 255, 264.
 1797, 126, 258-65, 301.
 1799, 266, 270.
 1811, 271.
 1814, 273, 353.
 1818, 274.
 1825, 150, 159-60.
 1836-9, 148-9, 158, 161 (n.).
 1847, 80.
 1857, 80, 150.
 1866, 80, 149, 195, 310.
 1873, 161 (n.), 184, 204, 312, 353.
 1882, 315, 324.
 1884, 147.
 1890, 141, 150, 158, 317.
 1898, 150, 204, 318-19.
 1901, 147.
 1907, 91, 147, 150, 158, 195, 204,
 338.
 1914, 80, 160, 212-14, 221, 224, 341.

Currency, *see* Money, Paper money,
 Cash, Legal tender, Gold,
 Credit, Payment, etc.
 Currency and Bank Notes Act, 1914,
 80, 160,
 Currency notes, British, 31, 80, 160,
 229, 232.

Custodian tender, 32 (n.), 202.

DEALERS, *see* Merchants, Retailers.
 in agricultural produce, 123.
 in investments, 26, 91-2, 141.
 in Foreign Exchange (*see also* Banking
 Exchange), 58, 104.
 Death penalty for currency offences,
 imposed in 1793, 239.
 Debasement of coinage, 173, 181, 183,
 280-3, 288, 369.
 Debt and credit, different names for the
 same thing, 3-4.
 Debts—
 adjustment of, on a change of stand-
 ard, 183, 237-2.
 assignment of, 4, 99-100, 186.

Débts—*cont.*—
 cancellation of, against one another, 4, 56-7, 185.
 continuity of, 182-3.
 dealer in, 4, 6, 14, 185-6.
 economic significance of, 14-15, 182-3, 185.
 in different places, not homogeneous, 57.
 effect of change of standard on, 183, 354-5, 356-7.
 means of discharging, *see* Payment, means of.
 origin of, in production, 4, 186, 376.
 relation of, to prices, 5, 182, 250.
 unit for measurement of, 2-3, 5, 182-3, 365.

Deflation (*see also* Credit, contraction of), 347-56.

Demand obligations of Bankers, 22, 48, 99, 186-7, 191-2.

Denmark, 230-1, 308, 345.

Denominations of coin and paper money, 72-3, 96, 159-60, 176, 235-6, 255, 265, 303-4.

Deposits, *see* Banker, Demand obligations, Interest.

Depreciation of the monetary unit, 13, 66, 75, 117, 129, 156-7, 173-4, 183-4, 223, 280, 347-63.

Depression of trade, 11-12, 126, 147, 356, 361.

Directoire, 239, 247-50, 252-3.

Discount Houses, 105, 155-6, 187, 208.

Discount, rate of, in London Market, 198.

Discounting of Bills, 101, 103, 104, 112-3, 152, 155-6, 185; at a financial centre, 104, 155-6.

Dollar, American, origin of, 305, 306.

Domestic Bills, 98.

Drain of money into circulation, 20, 22, 23, 28, 38, 89, 96, 107, 125-6, 130, 377.

Drawer of a Bill, 105.

Dutch East Indies, 120.

EDWARD VI, debasement of the coinage, 283.

Egypt, 123.

Elizabeth, recoinage of 1560, 287-8, 369.

Employment, effect of credit contraction on, 10, 125-6; effect of credit expansion on, 21, 125-6.

Endorsement of a bill, 51, 100, 105, 152, 192.

England—
 as a financial centre, 103, 288, 367.
 potential gold reserves of, in 1914, 224.

England—*cont.*—
 relative freedom of, from coinage debasements, 280.

English—
 coinage, 177, 253, 261, 280-8, 290, 292-8, 300-4.
 paper money (*see also* Currency notes, Bank of England), 73.
 system of bank reserves, 81, 197, 220.

Exchange, bills of, *see* Bills of exchange. medium of, 4, 15.
 rate of, proportional to purchasing power of monetary unit, 59, 67.
 rate of, favourable and unfavourable, 59.

Exchanges, foreign, *see* Foreign exchanges.

Exchequer, stop of the, by Charles II, 291.

Exchequer bills, advanced to embarrassed traders, 256, 272.

Expansion of credit, *see* Credit.

Expenditure, *see* Consumers' Outlay.

Export specie point, 63, 66, 74.

FAMINE, effect of, on currency in India, 336-7, 338-9; on currency in Russia, 327, 338.

Farmers, credit requirements of, 123.

Favourable and unfavourable exchanges, 59.

Federal Reserve Act, 1913 (United States), 78-9, 85, 198-9, 204-5.

Final expenditure, 41.

Finance, meaning of, 207, 227-8.

Finance bills, 195.

Finance companies, 142, 187.

Financial centres, 103, 104-6, 110-14, 117-18, 120, 154-6, 212.

Financial crises, *see* Crises.

Financing of—
 capital expenditure, 9, 91, 109, 142, 190, 194-5, 349.
 imports in war-time, 227, 228-9, 231.
 international trade, 101-6, 110-14.
 mobilisation, 160, 209, 214.
 production, 7-10, 186, 376.

Fisher, Prof. Irving, 47 (n.), 372.

Fixed capital, *see* Capital.

Fixed interest bearing securities, 93, 143, 357.

Fixed fiduciary issue of paper money, 77-8, 97.

Fixed fiduciary issue—
 in Austria-Hungary, 323.
 in England, 78-81.
 in Germany, 81-4.
 in India, 333, 343.

Fixed proportion system of note issue, 83-5; of bank reserves, 27, 48, 49, 196, 377.

Forced loans in France, 1793 and 1795, 239, 248, and 252.

Forced sales, in a crisis, 131, 133, 135, 141, 231, 259.

Foreign Exchanges, 56-71.

- the channel through which a credit expansion spreads, 89-90.
- dealers in, 58.
- demand and supply, 58.
- disadvantage of sustaining by loans, 145.
- effect on—
 - of a crisis, 131, 133, 145, 237, 265-6, 271, 273-5, 310, 312.
 - of an expansion of credit, 66, 74-5, 87, 90, 95.
 - of a failure of the harvest, 61-4.
 - of a foreign loan, 64-6, 94-5, 209.
 - of inflation, 116, 362.
 - of a protective tariff, 70, 271, 317, 327.
 - of rate of interest, 115-16.
 - of war, 209, 212, 213, 219, 223-5.
- favourable and unfavourable, 59.
- at a financial centre, 111, 117.
- with gold standard, 63, 65, 180.
- with inconvertible paper currency, 62, 65.
- market, commanded by England in 1914, 212-13, 224.
- mechanism of, 98-106.
- and prices of foreign commodities, 87.
- regulation of, without transmission of gold (*see also* Gold exchange standard), 118-22.
- regulation of, during the war, 346.
- relation of consumers' outlay to, 59, 64-5, 66, 68-9.
- relation of, to payments, 58, 70-1.

Foreign investments, *see* Investments.

Foreign loans, *see* Loans.

Foreign trade commodities, *see* Commodities.

Forgery of paper money, 30.

Fowler Committee on Indian Currency, 330.

Franc or livre, 183, 234, 288.

France—

- accumulates gold reserve after Agadir crisis, 219.
- assignats, *see* Assignats.
- Bank of, 78, 82, 157, 220, 233 (n.), 271, 274-5.
- bimetallism in, 174-5, 179, 274, 299, 303, 307.
- coinage of, in eighteenth century, 22, 200.
- France—*cont.*—
 - debasements of coinage in, 183, 280, 288.
 - denominations of coin and paper money in, 73.
 - exchanges favourable to, at outbreak of War in 1914, 214.
 - issues of paper money by, during the War, 217.
 - proof against crises after 1814 and 1877, 353.
 - silver unlimited legal tender in, 73, 157, 172, 308.
- Franco-German War, 310; indemnity, 307, 311.
- Free coinage, *see* Coinage.

GERMAN East Africa, 120.

Germany—

- accumulates gold reserve after Agadir crisis, 219.
- adoption of gold standard by, 179, 307-8, 311, 369.
- exchanges favourable to at outbreak of War in 1914, 214.
- note issue of, 81-2.
- quarterly settlement in, 82.
- use of legal tender paper in, 82-3.
- War finance of, 231-2.
- Gilt-edged securities, 93-4, 194.
- Girondins, 238, 239.
- Gold—
 - banker as dealer in, 167, 200-1.
 - certificates, 75-6, 97.
 - coinage price of, 74, 87, 88, 174.
 - coined in England in fourteenth century, 72-3.
 - cost of transporting, 63, 180.
 - cost of transporting in war-time, 213, 224, 345.
 - demand for, as currency, 33, 167, 172, 354, 368-9, 371-3.
 - demand for, for export, 75, 200.
 - demand for, for industry, 17, 167, 182, 371, 373.
 - discoveries of 1849 and 1850, 175, 307.
 - exchange standard—
 - adopted by financially weak countries, 118-19.
 - appropriate to dependencies, 120.
 - in a crisis, 160-1.
 - in India, 120-2, 332-5, 341-2.
 - in Russia, 327-8.
 - use of during the War, 345-6.
 - use of after the War, 354, 359, 372.
 - export of, 63, 66, 73, 75, 86-7, 106, 116, 154, 200, 229.
 - free market for, necessary at a financial centre, 106, 155.

Gold—cont.—

- as international currency, 116, 154, 172, 180, 370.
- movements, 63.
- movements and control of credit, 87, 8, 95-7, 107.
- movements—
 - during crises, 131, 133-4, 136-7, 139, 154, 158, 159.
 - and foreign loans, 65.
 - and rate of interest, 116, 154.
 - in war-time, 223-4.
- price of, becomes variable when gold payments are suspended, 74-5, 88, 154, 156.
- ratio of, to silver, *see* Ratio.
- reserves, 72-84, 110, 114.
- reserves—
 - after the War, 359.
 - effect of internal and external drain on, 107.
 - effect of international gold movements on, 87-8.
 - exist to be used, 80.
 - Indian, 122, 331-4, 341.
 - large, needed by a country which is not a financial centre, 118.
 - use of, in a crisis, 136, 139.
 - in war-time, 223.
- standard—
 - adoption of, 179, 299-343.
 - conditions of maintenance of, 74, 116, 157, 182.
 - effect of War on, 344-6.
 - future of, 354, 359-65.
 - and foreign exchanges, 63, 66, 86-9.
 - general prevalence of, 72, 89, 172, 179-81, 344, 370.
 - loyalty of London market to, 156, 367.
 - nature of, 17, 30, 167-8, 172-3, 180-2, 200-1, 367-8.
 - supply, 29, 175, 224, 229, 307-8, 371.
 - value or purchasing power of, 33, 35, 151, 167, 172, 276, 354, 359, 371-3.
- Goldsmiths, London, in seventeenth century, 289-92, 297.
- Government—
 - assistance in a crisis, 153, 201-2, 221, 236, 272.
 - borrowing, 92, 93, 207-8.
 - finance, 207; relation of to deflation, 350-2.
 - guarantees of bills discounted by Bank of England at outbreak of War in 1914, 221.
 - note issue, 49, 232.
 - regulation of banking, 50, 202-5.
 - regulation of subsidiary coinage, 177.
- Greece, 120.
- Greenbacks in the American Civil War, 232, 308-9, 375.
- Gresham, Sir Thomas, 285-6.
- Gresham's Law, 173-6, 280, 285, 315.
- Guineas—
 - end of, 303.
 - first issue of, 290.
 - required for payments below £5 till 1797, 255.
 - value of, 176, 178, 292, 297, 298.
- HAMBURG—
 - annexed by Napoleon, 271.
 - Bank of, 178, 192, 201, 257, 288.
 - exchange on, 257, 261-4, 266-7, 269, 270-1, 273.
- Harvest and foreign exchanges, 61, 90, 140-1; of United States, 141, 312-13, 318.
- Henry VIII, 280-2.
- Herschell Committee on Indian Currency, 329.
- Hoarding, 76-7, 123-4, 175, 294, 340.
- Holland (*see also* Amsterdam), a financial centre in seventeenth and eighteenth centuries, 103, 291; annexed by Napoleon, 271.
- Horner, Francis, Chairman of the Bullion Committee, 1810, 276.
- Hungary, *see* Austria-Hungary.
- INCOME, *see* Consumers' income.
- Inconvertible paper money, 31-3, 62, 129, 154.
- Index numbers of prices, 67-8, 267-8, 276, 365, 372, 374-5.
- India—
 - coinage of, 73, 121, 172, 330, 331-3.
 - effect upon, of demand for jute in 1906-7, 91.
 - employment of gold exchange standard by, 120-2, 332-5, 341-2.
 - a peasant nation, 123.
 - remittances, 121-2, 329, 332, 334.
 - reserves, 121, 122, 331-4, 341.
- Indian currency conditions, 335-41; currency and the War, 341-3.
- Industrial shares, 93.
- Inflation, 71, 84-5, 114, 116, 118, 127-9, 204, 218-32, 250, 314, 347, 361-2, 365.
- Instability of credit, *see* Credit.
- Insurance of bullion and specie, 180, 213, 267, 345.
- Interest—
 - loss of, on idle balances, 37, 40, 110, 188, 217.
 - payment of, on current accounts, 190.

Interest—*cont.*—
 rate of, 26, 43, 50-1, 81, 114-16, 197.
 deterrent, 30, 107-8, 120, 128, 153,
 215.
 falls when credit contracts, 11, 110,
 124-5.
 limited by usury laws, 255-6.
 local variations in, 117-18.
 rises when credit expands, 13, 24-6,
 124-5.
 regulation of credit by, 24-6, 107-18,
 170-1, 197.

Interest-bearing assets, 38, 93, 126, 192,
 193-5, 196.

International—
 co-operation in a crisis, 157-8.
 determination of the monetary unit,
 360-1.
 Exchange, *see* Foreign Exchange.
 financial centre, *see* Financial centre.
 markets, 59, 102-3, 110-14, 138, 279.
 securities, 141, 143.

Investment, 9, 36, 41, 91-5, 190.
 a form of expenditure, 9, 41, 91, 228.
 market, 91, 141, 194, 209, 210, 353.
 market, effect of War on, 209.
 relation of to temporary loans, 194,
 349.

Investments, foreign, 61, 65, 94-5, 144-5,
 209, 212, 310; demand for (*see*
also Savings), 92-5, 142.

Issue Department of Bank of England,
 78.

JACOBINS, 238, 243, 245, 253-4.

Japan, 120, 215.

Jerons, 268.

Johannet, 242-3.

Jute, demand for in 1906-7, 91.

KAFFIR boom, 147.

Kemmerer, Prof., 47 (n.).

Keynes, Mr. J. M., 119 (n.).

King, Lord, 265.

King's exchanger, 289.

LANDS, public, during French Revolution, *see* *Biens nationaux*.

Latent demand, *see* Credit, Cash.

Latin Union, 307.

Law, Sir E., on the demand for rupees, 336, 338.

Law, John, 235, 288.

Legal tender, 31-4, 17, 31, 171, 185,
 202-2, 253, 265.
coin, see Money, Coinage.
 does not exist in China, 180, 202.
 laws sometimes inoperative, 176.
 limited, 172, 177, 300, 301-2.
 notes, *see* Paper money.

Liquid assets, 195, 198.

Lisbon, 257.

Liverpool, Lord, 297, 300, 301-3.

Loans—
 at call, 146, 197-8, 318.
 forced, during French Revolution, 239, 248, 252.
 Government, 92, 93, 207-9, 347-8,
 351-2.
 International, 94-5, 115-16, 214-15,
 225-30, 346.
 to manufacturers, 7, 25, 109, 123, 136.
 to merchants, 7, 25, 109, 131, 135,
 216, 376, 378.
 Municipal, 92.
 Necker's, in 1789, 234, 253.
 short period, 37, 187-8; as banking
 assets, 50, 187-8, 192, 378, 380.
 temporary, for capital enterprises, 9,
 92, 109, 142, 194-5, 349.
 War, 209, 214, 218-32; Pitt's, 256-60.

Locke, John, on the coinage, 294-5, 298,
 304.

London—
 Bank rate, 81, 117, 125, 149-50, 198.
 Bills on, 106, 212; Indian, 122, 334,
 341-2.
 as financial centre, 103, 106, 117, 212,
 367.

London market—
 and Baring crisis, 317.
 effect of outbreak of War on, in 1914,
 212, 221, 229.
 in eighteenth century, 255.
 loyalty of, to gold standard, 156,
 367.

London Goldsmiths, *see* Goldsmiths.

Louis XIV, 291.

Louis XVI, execution of, 237.

Lowndes, William, on the coinage,
 293-5, 297.

Luxuries, 91, 137, 210, 240.

MACLEOD, H. D., 3, 150, 285 (n.).
Mandats Territoriaux issued under the
 Directoire, 249-52.

Manufacturers, loans to, 7, 29, 109, 123,
 376.

Margin, unspent, *see* Unspent margin.

Mark, German, depreciation of, 232.

Market—
 Foreign Exchange, 58.
 Investment, *see* Investment.
 prices and wages, 9.
 rate of interest, 51, 126, 197-8.

Markets, International, 59.

Maximum, Revolutionary Law of the,
 238, 241, 261.

Merchants—
 capital of, 135, 188.
 effect of rate of interest on, 25, 108, 114, 123.
 initiative of, 8, 25, 377-8.
 loans to, 7, 25, 109, 131, 135, 216, 376, 378.

Metallic standard, 17, 31-2, 167, 172-3, 179, 183, 188, 201, 280, 346-7, 354, 364-74.

Mexico, 344.

Middle Ages, currency problems in, 72, 179, 279-80, 356.

Mint price, *see* Coinage price.

Mobilisation, financing of, 160, 209, 214.

Monetary unit—
 adoption of depreciated, 280-1, 284, 287, 293-6, 304, 356-9.
 continuity of, 10, 182-3.
 dependence of, upon credit, 49.
 depreciation of, 13, 66, 75, 117, 129, 156-7, 173-4, 183-4, 223, 280, 347-63.
 determination of, by quantity theory, 34-5, 39, 52, 75.
 determined by locality in which a debt is payable, 101-2.
 duplication of, 183-4, 250, 297-8.
 measurement of, by foreign exchanges, 58.
 measures debts, 2-3, 5, 182-3.
 measures prices and values, 5, 33-4, 182-3.
 not to be defined in terms of the metallic standard, 183, 365-9.
 relation of, to coinage price of gold, 74, 173, 181-2.
 restoration of, after depreciation, 273-5, 296-8, 308-13, 346-8, 350-6, 359.
 under system of bimetallism, 174.
 value of, 5-6, 13, 129, 151, 225.

Money—
 of account, 2, 5, 14, 31, 74, 182, 295, 365-7.
 customary, 202.
 defined, 1, 17.
 demand for, 21-2, 30, 37-8, 48, 49, 52, 96, 159, 168, 170, 178, 189, 202.
 denominations of, *see* Denominations.
 different from bank credit, 5.
 functions of, 13, 15, 18-20.
 income and expenditure, 40.
 market, 70, 146.
 market, London, 125, 156, 212, 221.
 paper, *see* Paper money.
 pocket, 20, 21, 37, 168.
 quantity theory of, *see* Quantity theory.

Money—*cont.*—
 rapidity of circulation of, 46-8, 379-80.
 return of, from circulation, 38, 62-3, 126, 377.
 sometimes held to be a commodity, 17, 168-73.
 a standard of value, 15.
 a substitute for credit, 15.
 supply of, 38, 169-70, 178.
 treatment of, as subordinate to credit, 49, 52, 178, 185, 373, 377, 380.
 use of a commodity as, 2, 17, 167, 367.
 (*See also* Cash, Paper money, Gold, Circulation.)

Moratorium legislation, 210.

Mortgages unsuitable as Bank Assets, 194.

NAPOLEON, 253, 271, 272, 273.

National creditor, effect of change of standard on, 295, 304, 313-14, 357-9.

National Banks of United States, 189, 198-9, 204-5, 232, 315-6, 318-9.

Necker, failure of loans in 1789, 234, 253.

Negotiable instrument, 100.

New countries, 94, 144-5, 310, 316-7.

New credit, 7, 22, 40, 169.

New issues, 64, 92, 142-5.

New York, call money in, 146-7.

Newton, report on coinage by, in 1717, 298.

Nigeria, 120.

Northumberland, Duke of, coinage policy, 283-4.

Norway, suspension of free coinage of gold in, 230-1, 345; adoption of gold coinage by, 308.

Notes—
 bank, *see* Bank.
 British currency, 31, 80, 160, 229, 232.
 legal tender, *see* Paper money.

ORESME anticipates Gresham's Law, 285 (n.).

Ottawa, gold held by Bank of England at, 229.

Outlay, consumers', *see* Consumers' outlay.

Overdrafts, 98.

Overend & Gurney, failure of, in 1866, 80, 149, 195, 318.

Overtime earnings, 21, 22, 362.

Over-valued coins, *see* Coins.

PAPER money—
 comparison of, with other *entitling* documents, 168.

Paper money—*cont.*—

concurrent circulation of, with coin, 32, 77, 175.
 convertible into gold, 32, 72, 74.
 convertible into land, 245, 249, 253.
 definition of, 30.
 denominations of, 72-3, 159-60, 235-6, 255, 265.
 depreciation of, 129, 156-7, 223-4, 354.
 distinction of, from bank notes, 30.
 and Foreign Exchanges, 62, 65, 120.
 Government issue of, 49, 232.
 invented by the Americans, 305.
 issue of, by Central Bank, 50, 178.
 legal limitation of, 72-85, 96.
 necessity of, in war-time, 223.
 parity of, with money of account, 31.
 predominance of, in Europe, 82-3.
 premium on, in U.S. crises, 184.
 profits of issue on, 188, 189-90.
 regulation of, 49, 52, 72-85, 96, 120, 182.
 relation of, to Gold Exchange standard, 120.
 relation of, to a metallic standard, 32.
 speculation in, *see* Speculation.
 unlimited issues of, needed in a crisis, 158.
 value of, not dependent on ultimate convertibility, 32.

Paris—

Bourse during the Revolution, 247-8, 250, 262.
 crisis of 1882, 315, 324.
 Exchange on, 257, 269.
 Payment—
 means of, 13, 15, 17, 18-20, 30-1, 33, 56, 201-2, 207, 376.
 means of, demand for, 33, 38, 168, 170, 172.
 means of, relative demand for different, 18-19, 178-80.
 Peasants, financial arrangements of, 123-4, 339-40.
 Peel, Sir R., 80, 278, 304, 366-7, 368-9.
 Peninsular War, 275, 277.
 Perceval, 277.
 Periodicity of credit movements, *see* Credit.

Philippine Islands, 120.

Pitt, 256, 258-9, 263.

Pocket-money, 20, 21, 37, 168.

Pound sterling, 183, 303-4, 365-7, 368-9.

Prices—

adjustment of, to a change of standard, 280, 288, 295, 296, 356.
 of commodities which cannot be imported, 69.

Prices—*cont.*—

determined by the Quantity Theory, 34-5, 43-4.
 fall of, during a credit contraction, 11, 110, 124-6, 356.
 fall of, during a crisis, *see* Crises.
 index numbers of, 67-8, 267-8, 276, 365, 372, 374-5.
 measurement of, 5.
 relation of to debts, 5, 182, 250.
 rise of, during a credit expansion, 12-13, 24-8, 43, 68-9, 86, 114, 124-6.
 rise of, owing to issues of paper money during the War, 227.
 of securities, 92, 141, 143.
 wholesale, 43, 70.
 world, 59-60, 95.
 Producers, loans to, 7, 8, 40; effect of high interest on, 111.

Production—

effect of credit contraction on, 11, 111.
 effect of credit expansion on, 12, 21, 43, 114.

effect of increase or decrease in, 90.
 expenses of, 7, 8, 9, 40.
 speculative character of, 197.

Profits—

application of, to reduce indebtedness, 109, 148, 216, 349.
 of issue, 188, 190.
 reduced when prices are falling, or credit contracting, 10, 110, 124-6.
 rise of, during a credit expansion, 13, 21, 24-6, 93, 124-6, 143.

Promissory notes, 99.

Promoter of capital enterprises, 9, 91, 142, 376-8.

Promoter of capital enterprises, Bank acting as, 187, 194.

Protective tariff, 70, 271, 317, 327.

Prussia, Bank of, 81.

Purchase or sale, analysis of, 15, 185.

Purchasing power, supply of, 10, 38, 48, 169-70; demand for, 38, 168, 170, 172, 367.

QUANTITY theory, 35, 38, 44, 45-8, 52, 75, 121, 168-70, 173, 181, 379.

Quarterly settlement in German money market, 82.

RAFFRON, 243.

Railway development in United States, 310, 316; in Austria-Hungary, 311-12.

Rapidity of circulation, 46-48, 379-80.

Rate of interest, *see* Interest.

Rate of exchange, *see* Foreign Exchanges.

Ratio of gold to silver, 174, 267-9, 300-1, 306, 308, 314.

Recoinage of—
1560, 287-8, 369.
1606, 296-7.
1774, 300.
1816, 177, 302-4.

Rediscount of Bills, 83, 193, 196, 199, 204.

Reichsbank, German, 81-2.

Reign of Terror, 237-40, 254, 261.

Reserve Cities and Central Reserve Cities in United States, 198.

Reserves, *see* Gold reserves, Bank reserves.

Restriction of cash payments in 1797, *see* Bank of England.

Resumption of cash payments in—
Austria-Hungary in 1820, 322.
England in 1819, 304.
United States in 1879, 312, 314.

Retail dealer, 8, 20, 37, 69, 187.

Revolution, effect of, on currency systems, 206 (n.), 233-54.

Rобеспierre, 240.

Rubber boom of 1910, 147.

Rupee, 73, 121, 172, 329-43.

Russia—
advances by the Imperial (State) Bank to the Government, 220.
attempted return to specie payments in 1818, 274.
effect of war of 1876-8 on currency of, 326.
employment of gold exchange standard by, 120, 327-8.
exchanges unfavourable to, at outbreak of War in 1914, 214.
introduction of gold standard into, 328.
loans raised abroad by, for war with Japan, 214-5.
new issue of paper money in 1839, 326.
suspension of free coinage of silver in, 327.

SAVINGS, 9, 36, 91, 93, 94, 108, 142, 187, 190, 195, 214, 253, 349, 351.

Savings Banks, 22, 36, 37, 193-4.

Securities—
dealer in, 26.
effect of high interest on, 114.
effect of war on, 210.
fixed interest bearing, 93, 143, 357.

Security, collateral, 99, 133, 152-3, 194-5, 197.

Seigniorage, 181, 282, 284, 286, 300, 302-3.

Shares, 91-2, 93, 143, 146, 357.

Shipbuilding, 109.

Shipping, 61, 70.

Short-term loans, *see* Loans.

Silver—
cost of transporting, 180.
displacement of, by gold after 1850, 175, 307.
effect of abandonment of bimetallism on price of, 372.
effect of the War on price of, 342.
inconvenience of, for large payments, 176, 178, 179.
made limited legal tender in England, 300, 301.
overvalued, of unlimited legal tender, 72, 157, 172, 308.
penny, 73, 179, 281.
policy of United States, 1878-96, 314-20, 369-70, 372.
prices of, during the Bank Restriction, 269.
relation of price of, to world credit movements, 340-1.
standard in the Middle Ages, 72, 179, 280-1.
standard, no difficulty about subsidiary coinage with, 176.
subsidiary, 73, 172, 175, 176-7, 301-3, 307.
supply of, 179, 281, 288, 305.
use of, as money, 17, 176-80, 370.
use of, as money, in China, 72, 179, 344.

Small traders, credit of, 99, 197.

Smith, Adam, 301.

Somerset, Duke of, debasement of the coinage by, 282-3.

Sovereign, the, 303-4, 330-1.

Spain, 230-1, 344, 345.

Specie points, 63, 66, 74, 115, 121-2, 181, 224, 267, 345.

Speculation, 145-8, 153, 200-1.
in Argentine securities, 316-17.
in paper money, 33, 273, 355.
in the assignats, 246, 254.

Speculative assets, 94, 152.

State Bank, 50.

Standard of value—
change of, 183, 279-343, 346-59, 369.
requirements of, 10, 30, 374-5.
the future, 346, 354.

Stock Exchange, *see* Investment market.

Stock, manufacturing for, 123.

Stock of money (*see also* Unspent margin), 21-2, 37-8, 168-9.

Stock of commodities, 8, 42-3, 70, 109, 137, 148, 210, 215-16, 223, 349.
Straits Settlements, 120.
Suspension of payments, 22, 31, 56, 76, 88, 129, 137, 154, 200, 202, 203-4, 210, 223, 231, 318-19.
Suspension of legal limitation of paper money, 73-4, 76, 77-8, 80-82, 84, 129, 152, 218, 323.
Sweden, 230-1, 308, 345.

TAXATION, 207, 214, 232, 347.
Telegraphic transfers, 98, 105.
Temporary borrowing, *see* Short period loans.
Tooke, Thomas, 268-9.
Torres Vedras, 277.
Trade—
 after the War, 348-50, 356, 361-2.
 balance of, 90, 114, 138-41.
 cycles, 124-6, 373, 376-9.
 Home and Foreign, 110-11.
 International, financing of (*see also* Financial centre), 103-6.

Traders—
 balances, 41, 110, 217.
 classes of, 8, 110-11.
 needs of, for cash, 20.
 turnover, 37, 41, 47.

Transactions, volume of, 47.

Treasury Bills, British, 217.

Treaty Ports of China, premium on bank notes at, 178.

UNDERWRITERS, 93, 106, 109, 142, 152, 187, 194-5.

Unemployment, 36, 126, 356, 362, 377.

Unfavourable exchange, 59.

United States—
 banking system of, 78-9, 85, 129, 188-9, 204-5, 315-16.
 *British purchases in, during the War, 228-9.
 British War Loans in, 229.
 crisis of—
 • 1873, 161 (n.), 184, 204, 312.
 • 1893, 150, 204, 318-19.
 1907, 91, 147, 150, 158, 195, 204, 338.
 Civil War finance, 232, 309-10, 313-14.
 currency, 73, 85, 305-7, 308-20.
 Federal Reserve Act, 1913, 78-9, 85, 198-9, 204-5.
 Gold Standard Act of 1900, 320.
 harvests, effects of, 241, 312-13, 318.
 importation of gold into, during the War, 229.

United States—*cont.*—
 premium on paper money in, 184.
 prevalence of paper money in, 73.
 Railway development, 310, 316.
 Silver Acts, 314-20, 372.
 War inflation in, 230.
 War of Independence, 305.
 Unsaleable assets, 93, 148, 152, 194, 210.

Unspent margin, 6, 34, 35, 37, 39, 172, 186, 189-90, 367.

Usury laws in England, 258-6.

VALMY, battle of, 236.

Value—
 of gold, *see* Gold.
 of monetary unit, *see* Monetary unit.
 of paper money, *see* Paper money.
 relativity of, 5, 33, 374.
 standard of, *see* Standard.

Vanaittár, 277.

Venice as a financial centre, 103; Bank of, 288.

WAGE earners, 21, 36, 361-2.

Wages—
 effect of credit contraction on, 12, 125-6, 356, 362.
 effect of credit expansion on, 21-3, 28, 125-6.
 effect of inflation on, 250, 361-2.
 medieval, 72, 279-80.
 payment of, 20, 37, 56, 72, 159, 203, 255, 319.

War—
 American Civil, 232, 309-10, 313-14.
 of American Independence, 305.
 Crimean, 322.
 effects of, 126, 209-17, 221, 222-3.
 finance, 127, 206-32.
 inflation, 218-32, 347.
 Loans, *see* Loans.
 Russo-Japanese, 214-15.
 • Russo-Turkish, 326.
 taxation, 214.
 of 1689-97, 291.
 of 1914-19, 80, 126, 160, 212-14, 217, 220-1, 224, 228-32, 233, 343-3.
 Wars of French Revolution and Empire, 126, 233-78, 321-2, 353.

Waterloo, 273.

Wealth, relation of credit to, 227-8.

Wholesale prices, 43, 70; dealer, *see* Merchant.

Worn coin, 173, 177, 280.



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